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NATIONAL STUDY OF ABUSE OF OLDER PEOPLE:

Evidence from the Integrated Data Infrastructure

Prepared for Ministry of Social Development | Te Manatū Whakahiato Ora by the New Zealand Policy Research Institute, AUT



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Authors

Dr Wei-Lin Chen, Dr Rebecca Benson, Dr Lisa Meehan, Dr Ayesha Scott, and Professor Denise Wilson

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The views expressed in this report are those of the authors and do not necessarily reflect those of the MSD or any other government agency.

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Disclaimer

The following disclaimer applies to findings based on analysis of data from the Integrated Data Infrastructure (IDI).

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

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 authors, not Stats NZ or individual data suppliers.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements

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EXECUTIVE SUMMARY

This report explores the prevalence of abuse of older people (AOP; we define older people as those aged 55 and over) in the Integrated Data Infrastructure (IDI) data held by Stats NZ. We use several relevant administrative data sources (namely, police victimisations data, Accident Compensation Corporation (ACC) injury claims, hospital admissions, and interRAI home care assessment data), as well as the NZ Crime & Victims Survey (NZCVS) on self-reported victimisations. The IDI provides rare whole-population information on the most severe cases of harm – those that come to the attention of public services – and allows us to examine differences across demographic groups and impacts on health, income, and wellbeing.

Administrative data show very low prevalence of AOP

Each year, about 0.27% of the eligible population meet the criteria for abuse in any of the administrative datasets. While administrative data sometimes captures repeated incidents or related outcomes, the same event can appear in multiple sources (e.g. an event may appear in both police and hospital records), making it hard to distinguish separate incidents or measure intensity. For this reason, we focus on prevalence – whether an older person experienced at least one identifiable incident in a given year – rather than attempting to measure frequency or intensity of abuse, which the data cannot reliably capture.

Survey data show much higher prevalence

Prevalence in the NZCVS declined over time but was always much higher than prevalence in the administrative data. In the NZCVS, 2.2%–4% of older people reported AOP in a given year, compared with about 0.27% in the administrative data. Even when only cases reported to the police are included, the NZCVS prevalence remains higher. The *Prevalence survey on the abuse of older people in Aotearoa New Zealand*, carried out as part of the *National Study of Abuse of Older People*, shows an even starker contrast: about 16.7% of older people experienced abuse in the past 12 months.

Patterns in administrative and survey data are broadly similar

Although absolute levels differ greatly, patterns by demographic and socioeconomic group are broadly consistent across data sources. All show higher prevalence for Māori and people living in high-deprivation areas, and lower prevalence for Asian older people. Gender gaps are small, although administrative data show some inconsistencies across datasets. Both the NZCVS and the *Prevalence Survey Report* also report higher

prevalence for members of Takatāpui and Rainbow communities, disabled older people, and non-homeowners, which is consistent with the IDI patterns.

The IDI data significantly underestimate the prevalence of AOP

In the police, ACC, and hospital data, only cases of abuse that lead to interaction with these public services will be captured. Abuse that doesn't result in medical treatment, or is not reported to the police, will not contribute to our prevalence estimate. The NZCVS does not have this limitation, but still only captures some kinds of AOP. interRAI data include a wider range of abuse types than the other data sources, but its usefulness is limited by selectivity in who undergoes an interRAI assessment. Moreover, it serves as a risk indicator for potential abuse rather than a definitive indication that abuse is occurring.

Despite limitations, IDI data point to important disparities

IDI data show clear differences across time and between groups. These patterns may reflect underlying differences, but may also reflect changes in how agencies record, report, or respond to incidents. They should therefore be interpreted as patterns in the data on reported and recorded harm, not as direct measures of overall prevalence. Key points include:

- Prevalence in police data declined; while in ACC data, it rose across the period
- Prevalence was steady across the period, but declined in 2022
- Prevalence was similar for women and men, with small differences that vary by data source. For example, women show higher prevalence in ACC data, while men show higher prevalence in police and hospital data
- Apparent disparities may reflect both real differences in who is affected and differences in how groups interact with or are recorded by services.

Due to the nature of IDI data, these trends over time and demographic differences may be best interpreted as applying to severe cases of AOP that result in contact with public services. Even with these limitations, the IDI provides a rare opportunity to see consistent, whole-of-population information on the most serious cases of AOP and on inequalities in who is affected.

AOP captured in the IDI appears to impact the lives of victims

Despite the limitations of the IDI for detecting AOP, we can see some impacts of experiencing AOP clearly. Hospitalisation, mental health prescribing, and ACC outcomes suggest health is particularly impacted. There may also be impacts on income and income type, but these are less clear.

The findings have clear implications for policy and future research

For policy, the findings point to opportunities to strengthen detection and response. Routine AOP screening in health, justice, and social services, and improved coding for non-physical forms of harm, would make more cases visible in the administrative data. The inequities seen for Māori and high-deprivation communities highlight the need for equity-focused and culturally grounded prevention.

For future research, regular national prevalence surveys remain essential to capture the full extent of AOP. Linking across administrative datasets could improve our understanding of long-term impacts, and filling the evidence gap for residential care is urgent.

In short, administrative data provide only a partial view, but they confirm that severe harm exists, is unequally distributed, and has significant impacts. Used alongside survey evidence, the IDI adds unique insights into the outcomes of severe cases and the inequities that need to be addressed.

1 INTRODUCTION

This report is part of the *National Study of Abuse of Older People in Aotearoa New Zealand*, commissioned by the Ministry of Social Development (MSD) as part of its Prevention of Abuse of Older People (AOP) work programme. It presents research using existing administrative and survey data within Stats NZ's Integrated Data Infrastructure (IDI) to examine the prevalence of abuse of older people (AOP) among those aged 55 and over living in the community, and to assess how AOP is – and is not – captured in these data sources. The report draws on linked data from police, ACC, hospital admissions, interRAI assessments, and the NZ Crime & Victims Survey (NZCVS).

The *National Study* was undertaken in 2024 and 2025, with the wider project including five main components:

1. Prevalence Survey – A nationally representative survey capturing older people's self-reported experiences of abuse.
2. Integrated Data Infrastructure (IDI) analysis – Examination of AOP through linked administrative datasets, including the police, ACC, hospital admissions, interRAI, and the NZCVS.
3. Qualitative Interviews – In-depth interviews with older victim-survivors of abuse to explore the contexts in which AOP occurs, and the barriers and enablers to seeking help across four groups: Māori, Pacific, NZ European, and disabled people.
4. Contextual analysis of financial abuse – Mixed methods study exploring how financial abuse is identified, addressed, and prevented within financial institutions, supplemented with insights from the legal sector.
5. Analysis of economic and social costs – Estimates the economic impact of AOP on individuals, whānau, communities, and government systems, and outlines broader social consequences such as reduced wellbeing and lost productivity.

This study includes 10 key reports:

1. Overall synthesis report, summarising the key findings from all parts of the project.
2. Disability synthesis report, summarising key findings about AOP among disabled older people.
3. Survey findings report, presenting results from the *Prevalence survey on the abuse of older people in Aotearoa New Zealand*.
4. Survey methodology report.
5. Survey thresholds report, a supplementary report to the main *Prevalence Survey Report* that presents research into the application of AOP thresholds to the survey data.
6. Main Integrated Data Infrastructure (IDI) report, detailing analysis of AOP among those living in the community using administrative and the NZCVS data from the IDI **(this report)**.

7. Supplementary IDI report on AOP among those in aged residential care.
8. Qualitative interviews report, presenting findings from qualitative interviews of victim-survivors undertaken across four groups: Māori, Pacific, NZ European, and disabled older people.
9. Financial institutions report, presenting system-level insights on financial AOP from qualitative interviews with finance industry and legal professionals, and supplemented with other information gathered from financial institutions.
10. Economic and social costs report, presenting research into the economic and social costs of AOP in Aotearoa NZ (NZ).

The structure of the report is as follows. Section 2 describes the population of interest, data sources, and key definitions. Section 3 presents prevalence results across data sources and demographic groups. Section 4 outlines the methods used to construct comparison groups and define outcome measures. Section 5 presents the results of the outcome analyses. Section 6 discusses the findings, limitations, and implications.

1.1 Study aims and definition of AOP[1]

The aims of the report are: 1) to describe the prevalence of AOP that can be detected in the IDI and how this prevalence differs across demographic and socioeconomic groups; and 2) to describe the effect of AOP as seen in the IDI on various welfare outcomes.

Definition of AOP

Although there is some variation in the exact definition used across international research, the working conceptual definition of AOP is similar across the existing surveys examined. The *National Study* uses the following working definition of AOP, which is consistent with the most recent AOP *Prevalence Survey Report* completed in Australia:

> *A single or repeated act or failure to act, including threats, that results in harm or distress to an older person. These occur where there is an expectation of trust and/or where there is a power imbalance between the party responsible and the older person* (Qu et al., 2021).

The study aims to capture different forms of physical, sexual, financial, psychological, cultural & spiritual abuse and neglect. The Australian survey (Qu et al., 2021) was the first to include abuse relating to language and culture. In other parts of the *National Study* (refer to the *Prevalence Survey Report* and

[1] The *National Prevalence Study of Abuse of Older People (IDI)* was approved by the AUT Ethics Committee (AUTEC Ref. 24/368).

Qualitative Interviews Report), we extend this previous work by asking a more detailed set of questions on cultural (including language) harm, as well as spiritual abuse. We also asked these questions of all participants, whereas the Australian survey only asked these questions of culturally and linguistically diverse (CALD) participants.

Like most international work in this space, our focus is on AOP that was committed by someone known to the respondent (e.g. family members, friends, neighbours, acquaintances, or professionals (such as medical professionals, care workers, or finance professionals). This reflects the international definition of AOP, which emphasises harm that occurs within relationships of trust or where there is a power imbalance. In practice, this may not always align with the working definition of "an expectation of trust and/or where there is a power imbalance" between the party responsible and the older person.

For example, a neighbour or casual acquaintance might be known to the older person but may not hold a position of trust or power. Conversely, a stranger acting in an official capacity (e.g. a government agent) might hold significant power or trust, yet be excluded from the survey's scope because they are not personally known to the respondent. This highlights a potential grey area in how abuse is defined versus how it is measured in prevalence studies.

The definition of AOP used in the *National Study* does not require intent to harm. Harm is considered harm regardless of whether it was caused deliberately or unintentionally, through action or inaction. This reflects the reality that abuse can occur in a range of situations, including those where the behaviour is not recognised as harmful by the person responsible, or where it has become normalised over time. By focusing on the impact on the older person, rather than intent, the study aims to capture the full range of experiences that may cause harm or distress, particularly where there is an expectation of trust or a power imbalance.

This definition is consistent with international practice. For example, large national surveys in the UK and Ireland also define abuse as harm or distress occurring within relationships of trust, without regard to intent (O'Keeffe et al., 2007; Naughton et al., 2012). Some US research defines certain forms of abuse as intentional acts, but includes neglect without requiring intent (Acierno et al., 2010).

A note on terminology: We use the terms *abuse of older people (AOP)* and *harm* interchangeably. Abuse refers to the actions or failures to act that cause harm or distress to an older person. Harm describes the consequences or outcomes of those actions. Together, these terms capture both the behaviours and their impact on older people.

About AOP in the IDI

The IDI is a linked administrative database hosted by Stats NZ and contains a broad range of linked administrative data. At the centre of the IDI is the 'spine', which identifies individuals based on birth records held by the Department of Internal Affairs and immigration records held by the Ministry of Business, Innovation & Employment. The spine represents the ever-resident population – people who have lived in New Zealand at some point and therefore appear in official records. It does not always align exactly with the current resident population, but it provides comprehensive longitudinal coverage of people who interact with public services.

Government agencies collect data on individuals in the course of normal service operations (e.g. when an individual uses public services or interacts with the criminal justice system). In the IDI, these data are probabilistically matched to the spine, creating a longitudinal microdata set which theoretically covers the whole population. In practice, the completeness of IDI data is limited by patterns in public service use and success in matching data records to the spine. This means that some groups are less well represented than others (e.g. people who are less likely to engage with public services or whose records are harder to match) (Kokaua et al., 2019; Kvalsvig et al., 2019).

An advantage of using the IDI is that we can directly observe both AOP and its impact on the whole population (notwithstanding the limitations described above). This means our data are not affected by sample selection bias or inaccurate recall. However, there is an important caveat around our ability to observe AOP in the IDI; only those cases which result in an interaction with public services will be detected.

2 METHODS AND DEFINITIONS: PREVALENCE OF AOP

This section describes the population of interest for this study and how indicators of AOP are derived from administrative data and the NZCVS. It also provides some information on descriptive (demographic) variables.

2.1 Population of interest

The population of interest is NZ residents aged 55 and over. To identify this population within the IDI, we use the Stats NZ estimated resident population. Individuals are defined as being part of the resident population if they live in NZ, which is identified based on whether they interacted with government services, as captured by the administrative data in the IDI, as well as border movements and births and deaths data (Stats New Zealand, 2016). The population is then restricted to those aged 55 and above as of 30 June of the year of interest (2015–2022) using birth date information from the IDI personal details table.[2] We focus on 2015–2022 because this is the longest period in which all key administrative data sources – police victimisations, ACC injury claims, hospital admissions, and interRAI home care assessments – were available.

Next, we categorise people into three groups based on where they are living: private dwellings, residential care facilities, and other types of non-private dwellings. Each person's unique address identifier as of 30 June of the relevant year is available via the IDI address notifications table. To identify which type of dwelling the individual is living in, their address identifier is matched to the 2013, 2018 and 2023 census dwelling files, which specifies whether the address is a private dwelling, residential care facility, or another type of dwelling. Since the vast majority of dwellings are private, we assume those we cannot match to census dwelling records live in a private dwelling. This definition identifies 96.2% of the over-55 population as living in private dwellings, 2.7% in residential care facilities, and 1.1% in other non-private dwellings. We present prevalence separately for those living in private dwellings (this report) and those in residential care facilities (see the *supplementary Aged Care IDI Report*, Chen et al., 2026).

[2] Note that throughout this report, the year refers to the year ended 30 June. For example, 2022 refers to the year ended 30 June 2022.

Descriptive variables

As well as reporting AOP prevalence for our whole population of interest (sample of interest in the case of the NZCVS), we also provide prevalence broken down across demographic characteristics.

Table 1 shows how we assigned individuals to demographic categories.

Table 1: Demographic characteristics and their definitions

Characteristic	Data source	Definition or criteria
Age	Administrative data: IDI personal details table NZCVS: NZCVS	Administrative data: reference date minus date of birth NZCVS: self-report Age is grouped into 55-60, 60-65, 65-70, 70-75, and 75+
Born in New Zealand	Administrative Population Census	Binary variable
Deprivation	IDI personal details table Censuses	All addresses in New Zealand map onto meshblocks. These meshblocks assign values on the NZDep Index each census and are grouped into deciles of deprivation. We use the NZDep2018 Index (Atkinson, Salmond & Crampton, 2019) and combine deciles into quintiles.
Disability	2018 and 2023 censuses Manatū Hauora | Ministry of Health needs assessment (SOCRATES) interRAI HLFS survey General Social Survey	Following Stats NZ, we use the "Washington Group Short Set of Questions on Disability" (WGSS) to define disability (Stats NZ | Tatauranga Aotearoa, 2017).[3] The WGSS is included in the census, which provides the bulk of cases for this study, as well as in the Household Labour Force Survey (HLFS) and the General Social Survey (GSS). We also use the approach of the Social Investment Agency to derive disability status (Wright & Anastasiadis, 2022). The six questions that comprise the WGSS focus on six core functional domains: seeing, hearing, walking, cognition, self-care, and communication. Response options are: a. No – no difficulty b. Yes – some difficulty c. Yes – a lot of difficulty d. Cannot do it at all. An individual is classified as having a disability if they answer "A lot of difficulty" or "Cannot do it at all" in any category. Self-reported WGSS information is supplemented by administrative indicators that act as proxies for disability, such as interRAI assessments and Socrates (disability

[3] A more complete description of the set of questions is available at: www.whaikaha.govt.nz/support-and-services/guidance-and-resources/resources-for-academics/an-explanation-of-the-washington-group-short-set-of-questions-on-disability

Characteristic	Data source	Definition or criteria
		support) data. Stats NZ has investigated the concordance between administrative indicators and self-reported disability, finding only partial alignment (Wright & Anastasiadis, 2019). The study period was divided into 2015–2020 and 2021–2022. Respondents with any disability in 2015–2020 are classed as disabled for this whole period, and those with any disability in 2021–2023 are classed as disabled for 2021–2022.
Education	Administrative Population Census	Highest qualification held.
Ethnicity	IDI personal details table	Derived from multiple collections in the IDI. "Total response" ethnicity (i.e. individuals can contribute to the prevalence of more than one ethnic group). Categories are Māori; Pacific peoples; Asian; MELAA (Middle Eastern, Latin American and African); Other; and European.
Gender	Administrative data: IDI personal details table NZCVS: NZCVS	Administrative data: Derived from multiple collections in the IDI. Sex is recorded in the personal details table. For consistency, we refer to this variable as gender throughout this report. NZCVS: Self-report. We include two categories, male and female.[4]
Rainbow[5]	2023 census	If response to census gender question is "another gender" and/or response to gender status question is "transgender" and/or response to sexual identity question is coded as homosexual, bisexual, or sexual identity not elsewhere classified, respondent is categorised as part of Takatāpui and Rainbow communities. Respondents who are not part of Takatāpui and Rainbow communities based on above responses, and give responses "prefer not to say", "don't know", "response unidentifiable", "response outside scope", "not stated" in any of these questions are categorised as missing for this variable. All others are categorised as not part of Takatāpui and Rainbow communities.

[4] A third "another gender" category is not presented. Most administrative collections in the IDI record gender only as male or female, while the "another gender" response option is relatively recent and not consistently available across datasets. Also, the number in this category is small, which means results would not meet confidentiality rules in many cases.

[5] Note that we adopt the wording developed by Hohou Te Rongo Kahukura – Outing Violence (https://kahukura.co.nz/whakapapa/ "The words we use"). *Takatāpui and Rainbow communities* include: people with innate sex characteristics that do not fit normative medical or social ideas for male or female bodies; people who have a gender identity or expression that does not match the sex they were assigned at birth, including people who do not fit typical binary gender norms; and/or people who are not heterosexual. *Rainbow* is an umbrella term for sex, sexuality, and gender diversity.

Characteristic	Data source	Definition or criteria
Urban-rural	IDI personal details table Censuses	Addresses are grouped into large and major urban areas, medium and small urban areas, and rural areas. We follow Stats NZ's classifications (Stats NZ | Tatauranga Aotearoa, 2023).

Statistical significance is reported only for survey data (NZCVS), which are subject to sampling error. It is not applied to descriptive trends from administrative data, which cover all recorded cases. However, administrative data still have limitations, including biases in who interacts with services and how incidents are recorded. To explore associations within these data, we sometimes use regression models. In such cases, we report statistical significance in line with standard practice.

2.2 Indicators of abuse

We derive indicators of AOP from police, ACC, interRAI home assessment, and hospital admission data. We also use NZCVS data within the IDI to construct separate abuse prevalence rates. We examine only IDI data sources which contain information pertinent to AOP and that are considered to be of at least moderate utility for measuring AOP by Boven et al. (2023).[6] In selecting variables, we took a conservative approach. This meant prioritising indicators that had a high likelihood of reflecting genuine instances of AOP.

We describe the criteria for identifying AOP in each of these data sources below.

Hospital discharge data

We consider someone to have experienced AOP if they have had a private[7] or public hospital admission where the admission date is up to 12 months prior to the reference date (30 June), and the event meets at least one of the following criteria:

1. The medical description (including International Classification of Diseases (ICD-10) codes)[8] of the event includes at least one of the following: sexual abuse, physical abuse, psychological abuse, other maltreatment syndromes, maltreatment syndrome (unspecified); and/or

[6] Boven et al. (2023) assessed the usefulness of different IDI data sources for measuring AOP, rating each source from low to high utility. Their framework guided our decisions about which sources to include in this analysis.
[7] While we include private hospital admissions for completeness, no cases of AOP were identified via the private hospital data.
[8] ICD-10 codes are part of the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, developed by the World Health Organization (World Health Organization, 2010). They provide a standardised system for classifying diagnoses and health conditions in clinical and administrative data.

2. The medical description of the event includes “assault”, and the assailant is a spouse, partner, parent, family member, carer, acquaintance, or friend; and/or
3. The medical description of the event includes “maltreatment”, and the assailant is a spouse, partner, parent, family member, carer, acquaintance, or friend.

While the hospital data include several different types of abuse, many people experiencing AOP will not present to a hospital (Boven et al., 2023). A major limitation of these data is that only AOP which is severe enough to result in hospital admission will be captured. Also, these data are mostly limited to abuse of a physical nature. Thus, these data will likely underestimate the true extent of AOP.

Neglect does not have specific ICD-10 or police coding categories, meaning it is not identifiable in these administrative datasets. Only extreme cases that trigger hospitalisation or police involvement may appear, and even then not in a way that can be separately identified.

Accident Compensation Corporation

We consider someone to have experienced AOP if they have an ACC claim record with an event date that is up to 12 months prior to the reference date (30 June), and the event meets at least one of the following criteria:

1. The medical description (including ICD-10 codes) of the event includes at least one of the following: sexual abuse, physical abuse, psychological abuse, other maltreatment syndromes, maltreatment syndrome (unspecified); and/or
2. The medical description of the event includes “assault”, and the place of event is home; and/or
3. The ACC claim has an “assault flag” and the place of the event is home; and/or
4. The ACC claim has a “sensitive claim” flag.

ACC data captures all injuries where the victim seeks medical treatment. This should capture some cases of abuse missed by the hospital data, but it will miss cases where no medical treatment is sought. Like the hospital data, ACC data captures primarily physical abuse, along with some cases of sexual abuse.

A limitation of the ACC data for our purposes is that it does not distinguish between injuries caused by someone known to the victim and those caused by a stranger. Thus, we restrict attention to the incidents relating to the ICD-10 codes mentioned above, as well as assaults which take place in the home. Assaults that take place in the home are most likely to be committed by someone the victim knows, with incidents such as assaults during home invasions by strangers being relatively rare occurrences. This definition is used in other family violence contexts, and incorporated into the family and sexual violence IDI code

module (Te Puna Aonui, 2024).[9] However, it will not capture assaults committed by a person who is known to the victim if they occur outside the home.

Another limitation of ACC data is that some groups are less likely to lodge ACC claims after an accident. For example, those of Chinese, Māori, or 'other' ethnicity were less likely than New Zealand Europeans to have an accepted ACC claim in the event of suffering a limiting injury. Those who were older and those with less physical jobs were also less likely to make a claim in the event of an injury (Poland, 2018).

Police recorded crimes: Victims

The police victimisations data includes information on recorded victimisations from 2014 onwards. We identify AOP in this database in the following way. First, we include every type of offence available in the dataset, namely:

- murder
- attempted murder
- manslaughter
- driving causing death
- assault
- sexual assault
- abduction and kidnapping
- robbery
- blackmail and extortion
- unlawful entry with intent
- burglary
- breaking and entering
- theft
- illegal use of property

[9] www.stats.govt.nz/integrated-data/code-modules-initiative/

We then consider someone to have experienced AOP if they were the victim of an offence listed above up to 12 months prior to the reference date (30 June) and the offender is known to the victim (as opposed to the offender being a stranger or where the offender is not identified).

This dataset provides useful information on victimisations where the offence was reported to the police, the victim was identified in the records, and the nature of the relationship between the offender and victim was known and recorded. However, it has a number of notable limitations. A main limitation is that it only captures offences that are reported to the police. Also, it only covers forms of AOP that constitute specific offences (Boven et al., 2023). Indeed, many abusive behaviours may not be classified as specific offences (e.g. for psychological abuse, behaviours such as insulting, belittling, and ignoring are not offences under this offence code).

Another limitation is that police reporting in the IDI only counts incidents where a specific offence is recorded. Many situations are excluded because they do not lead to a recorded offence and/or do not involve a specific offence. While police may collect information about these incidents, that information is not passed into the IDI. This means matters resolved informally, cases where the complainant withdraws their complaint, situations where the police cannot follow up because they cannot contact the complainant, or 105 non-urgent reports that are logged but not investigated further are not captured.

There are also limitations of the police victimisations data more generally, such as that it does not have as complete coverage as the police offences database for several reasons. For example, the police may not take the details of a victim who is reluctant to provide them and where this information is not necessary for police purposes. Another reason is that burglary offences are often recorded without a victim since it may be unclear who the victim is (e.g. a particular member of the household, all members of the household, the owner/s of individual items that were stolen, etc).

interRAI Home Care Assessment data

In NZ, Te Whatu Ora | Health New Zealand is responsible for the interRAI programme. interRAI is an internationally developed suite of clinically validated assessment tools designed for older people who require support with daily living. Home care assessments are one of six interRAI assessment instruments used in NZ. They provide a clinical assessment that informs and guides the planning of care and services in community-based settings. It includes several criteria that are used to assess a person's risk of abuse.

Unlike the other data sources described above, the interRAI home care assessment indicators are used to assess an individual's *risk of* abuse; it does not provide a definitive indication that abuse is occurring. We consider a person to be at high risk of abuse if they meet both criteria in Table 2 in an interRAI assessment in the last 12 months.

A limitation of using interRAI to assess AOP is that assessments are only conducted on a select population, who tend to be older and frailer than the overall population of older adults (Hall et al., 2022). Because interRAI is specifically targeted at people entering aged residential care, or receiving publicly funded home-based care, prevalence in this dataset reflects a particularly vulnerable subset of older people rather than all older New Zealanders.

Another limitation is that interRAI home care assessments are also considered to underestimate the risk of abuse. One reason is that the assessments are sometimes conducted with other people present (e.g. family members or carers) (Boven et al., 2023; Hall et al., 2022). Also, by its nature, the assessment is likely to capture some forms of abuse better than others (e.g. physical abuse or neglect may be better captured than financial abuse). Even in the case of neglect, the home assessment may only pick up neglect that is of a more severe nature given the criteria in Table 2.

Table 2: interRAI home care assessment criteria

Criteria	Indicators	Definitions
First criterion: one or more of the three indicators		
	F1e: Fearful of a family member or close acquaintances	The person expresses feelings such as abandonment, ingratitude on part of the family, lack of understanding by close friends, or hostility regarding relationships with family or friends.
	F1f: Neglected, abused, or mistreated	The person experienced a serious or life-threatening situation or condition that went untreated or was not appropriately acknowledged. The situation may have put the person at risk of death, or of complications that impinge on physical or mental health.
	J3t: Unusually poor hygiene, unkempt or dishevelled appearance	Denote as 1 if the assessor chose 2, 3, 4, otherwise 0. 0: Not present 1: Present but not exhibited in the last 3 days 2: Exhibited on 1 of last 3 days 3: Exhibited on 2 of last 3 days 4: Exhibited on 3 of last 3 days
Second criterion: Two or more of the seven indicators		
	J7a: Conditions/diseases make cognitive function, activities of daily life (ADL), mood, or behaviours unstable (fluctuating, precarious, deteriorating)	For example, a person may have conditions such as ulcerative colitis, rheumatoid arthritis, or multiple sclerosis that causes pain or impairs mobility or sensation, resulting in increased dependence on others and depression.
	J8: Self-reported health	Denote as 1 if indicator is 3, otherwise 0. 0: excellent; 1: Good; 2: Fair; 3: Poor; 8: could not respond

Criteria	Indicators	Definitions
	M3: Adherent with medications prescribed by physician	Denote as 1 if indicator is 1 or 2, otherwise 0. 0: always adherent; 1: 80% of time in the last 3 days, and the last 24 hours; 2: less than 80%
	K2a: Weight loss	Weight loss of 5% or more in the last 30 days, or 10% or more in the last 180 days.
	K2c: Fluid intake	Fluid intake less than 1,000 ml per day.
	F1d: Anger or conflict with family or friends	The person expresses feelings such as abandonment, ingratitude on part of the family, lack of understanding by close friends, or hostility regarding relationships with family or friends.
	sDRS: Depression	The Depression Rating Scale (DRS) uses seven Minimum Data Set (MDS) assessment items to screen people for depression. A person's DRS score describes their mood during the three-day look-back period. It also considers a person's symptoms that are present but not exhibited during the observation period. The DRS is 'observer rated' (Martin L., 2008), which means it ignores the context or assumed cause of the behaviour. Each assessment item used by the DRS is given a code of 0, 1 or 2, and then the seven items are totalled to give the person's DRS score. The DRS ranges from 0 to 14: the higher the score, the greater the likelihood that they will be clinically diagnosed as depressed within the next six months. A score of 3 or higher identifies that the person is at risk of clinical depression (Burrow, 2000).
	Residential setting judged to be unable to meet needs, and it would be best if the person moved	
	P2b: Primary informal helper expresses feelings of distress, anger, or depression	Primary caregiver expresses by any means that he or she is distressed, angry, depressed, or in conflict because of caring for the person.
	E1i: Withdrawal from activities of interest	Including longstanding activities, being with family/friends.
	E1j: Reduced social interactions	
	F2: Lonely	The person states or otherwise indicates that he or she feels lonely. The person may feel that others do not visit enough or desires more social interactions even if visited regularly. Others may also report that the person sometimes comments on feeling lonely.
	BMI	Denote as 1 if it is lower than 19, otherwise 0.

NZ Crime & Victims Survey

The NZCVS collects information about New Zealanders' experiences of crime. It is an annual survey that has run since 2018 and includes approximately 8,000 respondents each year (although the number of responses was lower for cycle 5 due to COVID-19). The target population is NZ usual residents aged 15 and over who live in private dwellings. Residents of retirement villages are in scope, but those in aged care facilities are not (Ministry of Justice, 2022, 2023). We use the first five cycles of data (2018–2022) available within the IDI at the time of writing.

The NZCVS data available within the IDI include responses to questions that were asked in cycle 1 and subsequent cycles of the NZCVS. Therefore, it does not include additional questions that were included in later cycles or as ad-hoc modules, including family violence and controlling behaviour modules. Also, it only includes the approximately 93% of NZCVS respondents who agreed to have their data linked to the IDI. However, a comparison of the NZCVS data within the IDI and published Ministry of Justice data, which uses all NZCVS responses, suggests that the characteristics and victimisation rates of the IDI and full samples is similar (Meehan & Schober, 2024).

We consider an event to be AOP if it involved any of the following types of offences and the offender was known to the victim:

- murder/attempts to murder/manslaughter/driving causing death
- assault
- sexual assault
- abduction and kidnapping
- robbery
- blackmail and extortion
- unlawful entry with intent/burglary/breaking and entering
- theft
- illegal use of property
- cybercrime/fraud
- harassment and threatening behaviour
- damage to property (including motor vehicles)

- unlawful interference/getting into motor vehicle

Like the police data, the NZCVS has limitations in the types of AOP it captures. For example, financial abuse is out of scope of the NZCVS (Ministry of Justice, 2022, 2023). Also, while the NZCVS asks respondents to describe events rather than asking specifically about crimes to elicit information on incidents that respondents may not recognise as "crimes", responses are then coded into broad crime groupings using the Australia and New Zealand Standard Offence Classification (ANZSOC). Thus, incidents which are not crimes, but may be AOP (such as psychological abuse involving belittling, or cases of neglect that do not meet the threshold of an offence), are not included in the NZCVS AOP prevalence rate.

We apply the survey weights provided to ensure the NZCVS sample is representative of the target population. These adjust for, among other things, the oversampling of Māori respondents (Ministry of Justice, 2023).

2.3 Identifying cases

We conceptualise prevalence using person-years as the unit of analysis (i.e. we are attempting to estimate the share of the population of interest who experienced AOP in a given year).

Our data capture instances of abuse. This means that a single instance of abuse could appear in multiple datasets, and that a victim experiencing ongoing abuse (rather than a single isolated incident) may meet our definitions of AOP on more than one occasion, whether in a single dataset or across multiple datasets.

To derive prevalence from these data, we calculate the share of the population who experienced one or more instances of AOP in each year. This approach means we do not have a measure of intensity of abuse, although any attempt to measure intensity would likely have high levels of measurement error as we would have to discern if cases present in multiple data sources were the same or separate incidents.

Throughout this report, we use "overall prevalence" to refer to estimates from combining the four administrative data sources.

3 AOP PREVALENCE

In this section we present the prevalence of AOP in the administrative data (Section 3.1) and in the NZCVS (Section 3.2). Results from administrative data are not directly comparable with results from the NZCVS because the administrative measures use the entire resident population living in the community aged 55 and over in the denominator,[10] while the NZCVS uses only the sample who participated in the survey. Nonetheless, we do compare NZCVS data with police data in Section 3.2.

Table 3 shows the distribution of the population across our descriptive variables.

Table 3: Population characteristics

Variable	Group	Group share (%) (N=10,369,149 person-years)
Sex	Male	47.8
	Female	52.1
Rainbow (85.4% non-missing)	Non-Rainbow	98.5
	Rainbow	1.5
Ethnicity (total response)	Māori	9.6
	Pacific peoples	3.8
	Asian	8.3
	MELAA & other	2.0
	European	80.9
Age	55–60	23.1
	60–65	20.5
	65–70	18.1
	70–75	14.8
	75+	23.2
NZ birth status (98.1% non-missing)	Born in NZ	73.8
	Not born in NZ	26.1

[10] However, it should also be noted that interRAI assessments are only undertaken on a select population group (see Section 2.2).

Variable	Group	Group share (%) (N=10,369,149 person-years)
Highest qualification (94.5% non-missing)	No qualification	23.7
	Levels 1-4	46.0
	Levels 5–6	12.4
	Level 7 and above	17.7
Disability status	Disabled	13.2
	Not disabled	88.3
Home ownership (84.6% non-missing)	Home owner	76.3
	Non-homeowner	23.6
Deprivation quintile (1 is least deprived)	1	21.5
	2	21.0
	3	20.2
	4	19.5
	5	17.5
Urban category	Large and major urban area	58.6
	Medium and small urban area	22.5
	Rural area	18.8

3.1 AOP prevalence in administrative data

Figure 1 shows AOP prevalence for each year from 2015 to 2022 by administrative data source, as well as the overall prevalence. The overall prevalence is about 0.27%, and this rate is fairly steady over time.

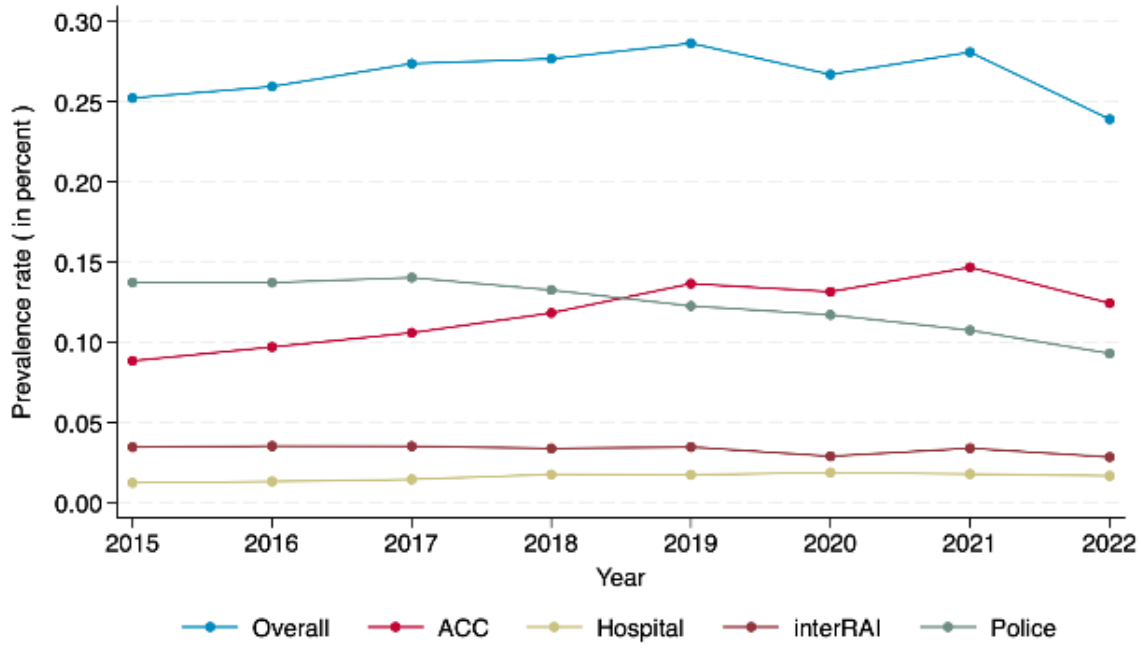
Police data make the largest contribution to the overall AOP rate. Police data provide a prevalence rate of about 0.14%, with this rate decreasing over time to less than 0.1% by 2022. The cause of this decline remains unclear. It could reflect an actual decrease in AOP prevalence, or a change in police practices (e.g. in the way they recorded/classified incidents). This highlights a more general limitation of using administrative data for this purpose – changes over time can reflect changes in policies/practices rather than actual changes in the underlying prevalence.

The decline might also be linked to COVID-19. For example, during lockdowns, people may have had less exposure to potential harm outside the home because of fewer interactions with others. At the same time, harm occurring within the home may have been less visible to others and therefore less likely to be

reported. However, the drop was gradual and started before 2020, rather than showing a sharp fall around the onset of COVID-19 restrictions, so this explanation seems less likely.

AOP prevalence as measured by ACC data has been increasing over time, from 0.09% in 2015 to a peak of 0.15% in 2021. Once again, it is unclear why the rate is increasing over time. It may reflect that AOP incidents were actually increasing, or it may be because of changes to ACC policies/practices. Hospital and interRAI data both have prevalence rates of less than 0.05%, with not much change over time.

Figure 1: AOP prevalence, overall and by data source, 2015–2022



Administrative data show AOP prevalence of about 0.27% each year, while the *Prevalence Survey* finds around 16.7% of older people experienced AOP in the past 12 months (Meehan et al., 2026). This stark difference reflects the fact that administrative sources only capture cases severe enough to reach services such as police, hospitals, or ACC. In contrast, surveys capture a much wider spectrum of experiences, including psychological, financial, cultural & spiritual harm, and neglect.

AOP prevalence in administrative data, by gender

The AOP prevalence rates for men and women are similar at the beginning of the period investigated but begin to diverge from 2018, with women's rates being slightly higher than men's (Figure 2). The prevalence rate for men starts to decline slightly from 2018, with a sharper decline between 2021 and 2022. The prevalence rate for women starts to decline later, from 2020, with a sharp decline also in 2022.

Figure 2: Overall AOP prevalence by gender, 2015–2022

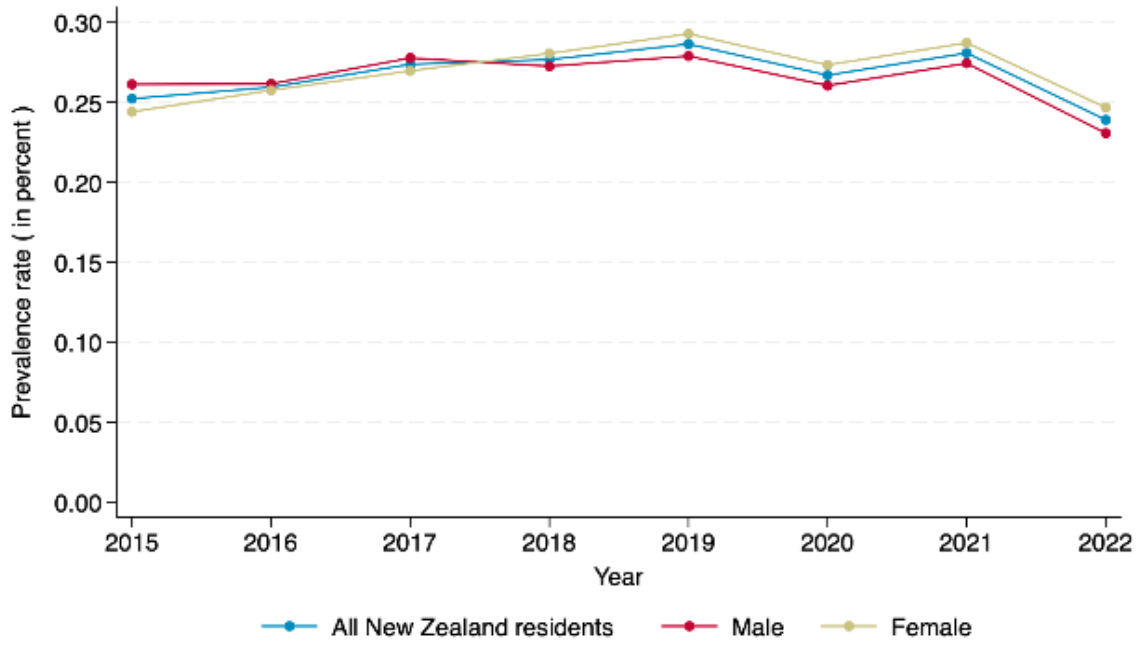


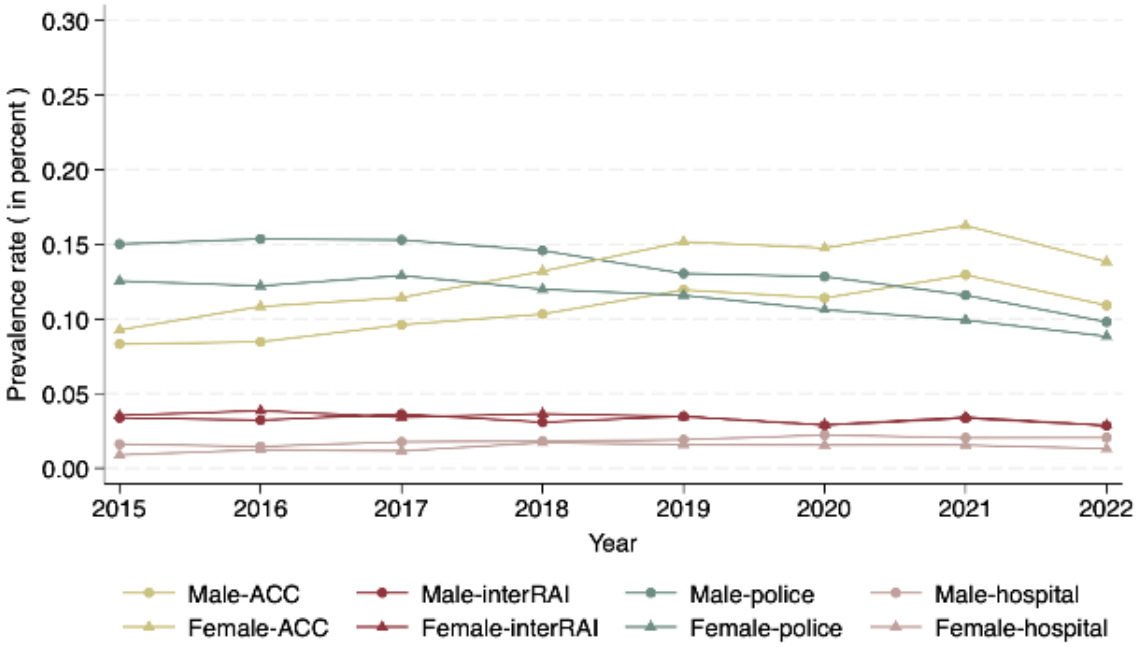
Figure 3 breaks down these overall results by gender into the underlying data sources. In police data, the prevalence rate for men is noticeably higher than that of women, and this continues even as the AOP prevalence in the police data decline over time for both men and women, starting from 2018. As discussed above, it is unclear why this is the case.

The share of individuals with AOP cases identified via ACC data is increasing over time, as discussed above, with the increase being particularly strong among women. While this could represent an increase in AOP, another possibility is that it reflects changes in ACC operational policy, or changes in people's propensity to access ACC if they experience an ACC-eligible incident. In this case, it could reflect increasing public awareness of ACC's coverage of sexual abuse and assault over this time period, resulting in a large increase in sexual abuse/assault claims (ACC, 2021). This could also explain why the increase is more pronounced for women than men.

While the absolute difference in prevalence between men and women is small in the other datasets, hospital admissions data show a large relative difference; prevalence of men is around 0.02% throughout the period, while for women it is generally below 0.015%.

In interRAI data, prevalence is comparable between men and women across the period.

Figure 3: AOP prevalence by data source and gender, 2015–2022



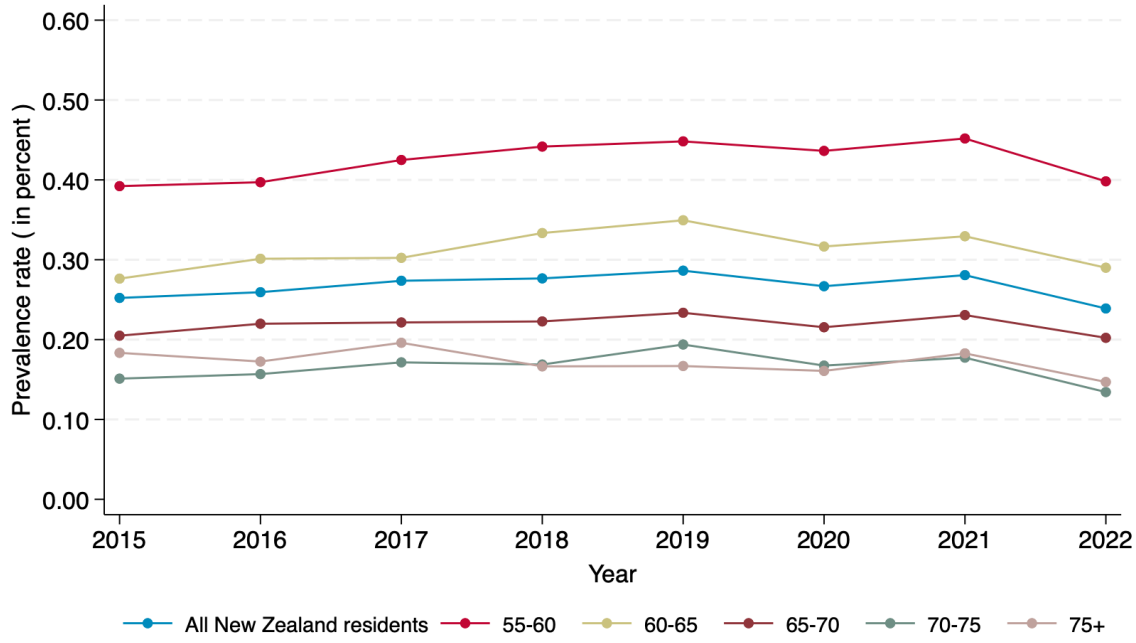
Comparing these results to the *Prevalence Survey Report*, the survey also shows similar overall AOP rates for women (17.5%) and men (15.8%), with weak evidence of a difference (Meehan et al., 2026). This is consistent with small gender gaps in the IDI results, noting that police and hospital data show higher rates or men, while ACC shows higher rates for women. However, as noted in Section 3.1, the prevalence rates from the survey are much higher overall.

AOP prevalence in administrative data, by age group

AOP prevalence generally decreases as age increases (Figure 4). This pattern may reflect the fact that administrative data is better at capturing physical abuse and assault than other forms of abuse, such as psychological or financial abuse. It may also reflect that physical assaults themselves tend to decline with age. For example, it aligns, to some extent, with the well-documented age-crime curve, which shows that offending (including assaults) generally decreases with age. While our focus here is on victimisation rather than offending, the two can be connected in some contexts. For instance, some assaults occur in situations of interpersonal conflict where both individuals experience harm, or in settings where physical altercations involve both victimisation and offending. These dynamics may contribute to the observed decline in recorded victimisation with age. There could also be a selection effect at play as older people who are more at risk of AOP may be more likely to move into residential care and are therefore no longer part of the population of interest.

The downward trend in AOP prevalence with age also aligns with findings from the *Prevalence Survey Report* (Meehan et al., 2026) and the Australian national prevalence survey results (Qu et al., 2021). However, other surveys (e.g. Ireland) found AOP increases with age (Naughton et al., 2010). Also, AOP surveys also find that the age patterns differ for different groups and/or by the type of abuse. For example, the UK survey found AOP increases with age for men, but decreases with age for women (O'Keeffe et al., 2007), and the US survey found that physical and psychological abuse decreases with age, but age is not related to rates of sexual, and financial mistreatment (Acierno et al., 2009). Preliminary results from the NZ survey find that physical, sexual, and psychological abuse generally decrease with age. However, neglect and financial abuse tend to be u-shaped, decreasing with age before increasing in the oldest age group.

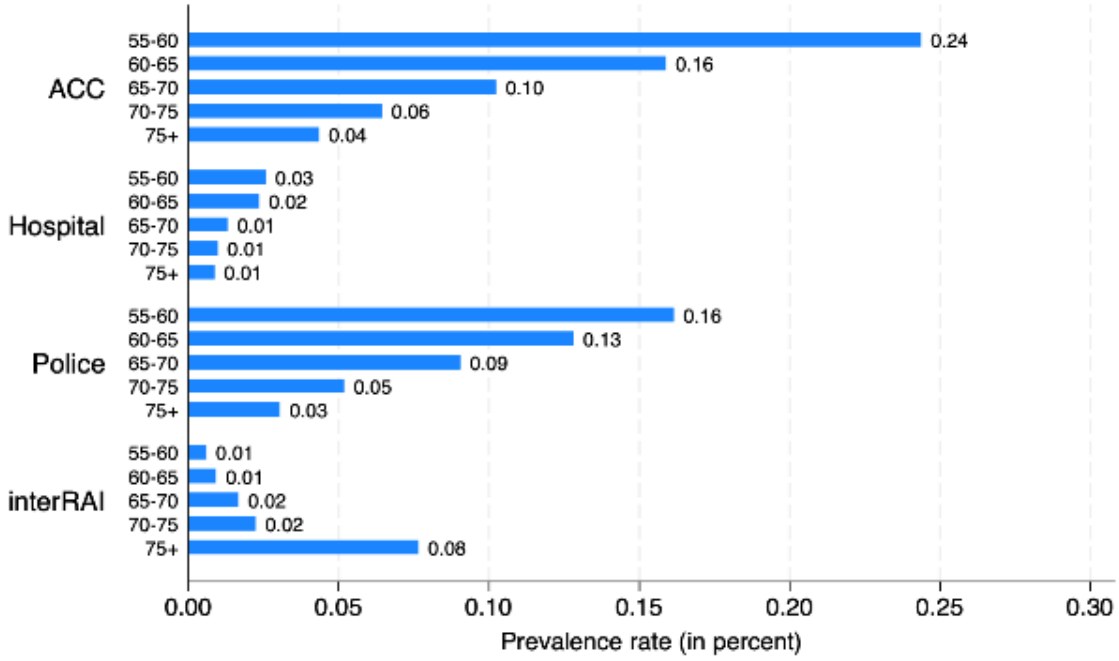
Figure 4: Overall AOP prevalence by age group, 2015–2022



More detail about AOP prevalence by age is presented in Figure 5, which shows AOP prevalence by age group and data source in 2022. Police victimisations data account for the largest share of cases, particularly in the younger age groups. The same pattern of decreasing prevalence rates by age groups is evident with the ACC data. The interRAI data shows the opposite pattern, with the prevalence increasing with age. This is expected, as interRAI assessments are carried out on those who need assistance and are therefore more likely to identify abuse risk among older, frailer individuals (Hall et al., 2022).

Taken together, the differences highlight how the choice of data source shapes the age profile of AOP. Data focused on acute events, such as police or ACC records, capture higher prevalence at younger ages. Data focused on care needs, such as interRAI, capture higher prevalence at older ages.

Figure 5: AOP prevalence by data source and age group, 2022



Comparing these results to the *Prevalence Survey Report*, the survey also finds that prevalence falls with age; 23.3% at ages 55–64 versus 7.9% for those aged 75 and over (Meehan et al., 2026). This aligns with the overall decline in the IDI. interRAI is an exception because it assesses people who need support; rates therefore rise with age.

AOP prevalence in administrative data, by ethnicity

Figure 6 presents AOP prevalence rates by ethnicity over time. The prevalence rate is highest among older Māori, and lowest among older Asian people.

Figure 6: Overall AOP prevalence by ethnicity, 2015–2022

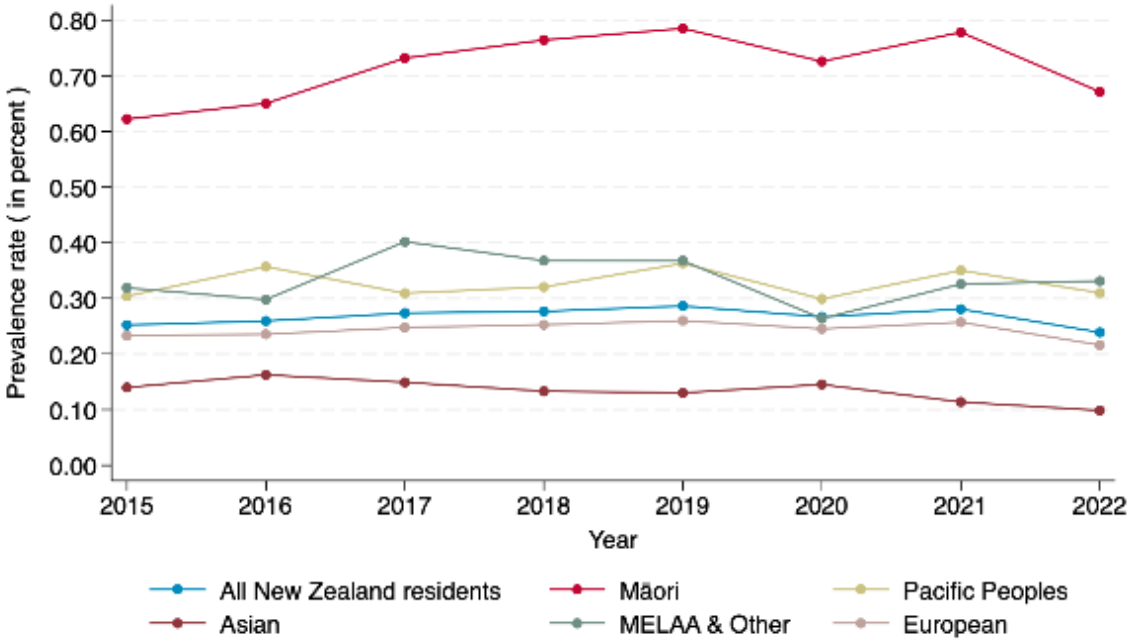
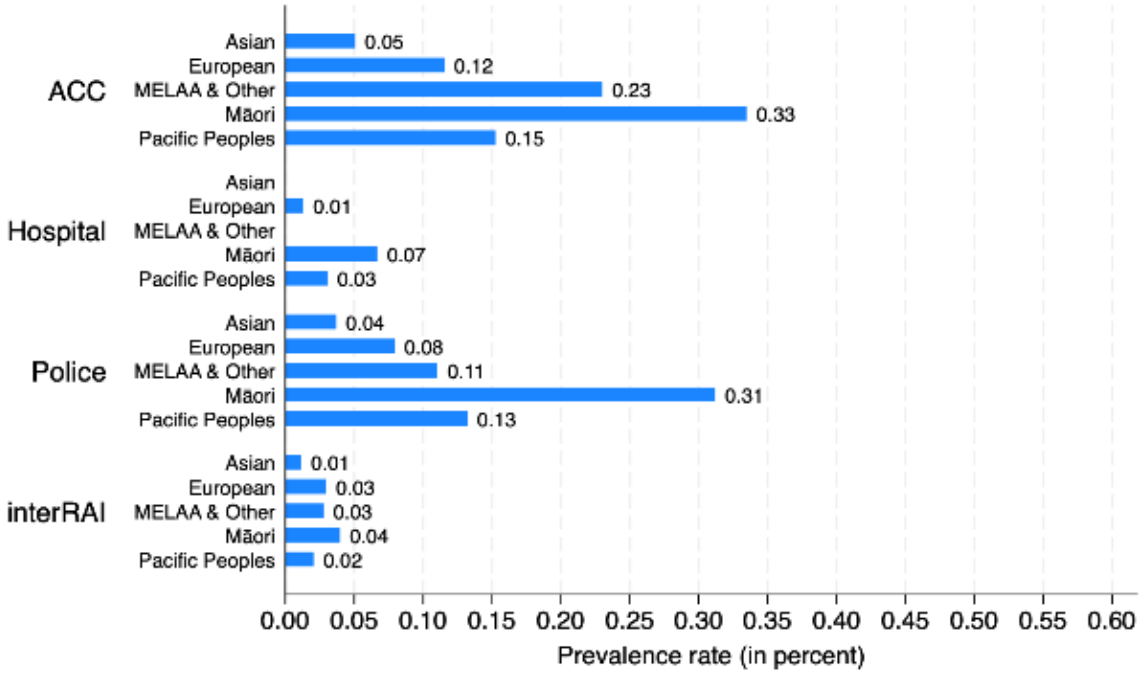


Figure 7 shows AOP prevalence by data source and ethnicity. Within each data source, Māori have the highest prevalence of AOP. This is most extreme in the police data where 0.31% of Māori experience AOP, more than double the next highest prevalence (0.13% among Pacific peoples). The figure also shows Asian older people have the lowest prevalence rates across all data sources. Pacific peoples have relatively low rates in ACC and interRAI data, but the second highest rate after Māori in the police data.

As mentioned above, one limitation of using administrative data to measure AOP is that these data are based on service use, and thus differences across groups could reflect differences in service access as well as differences in AOP prevalence. For example, in the event of an injury, Asians tend to have lower rates of ACC claims than NZ Europeans (Poland, 2018). Also, the overrepresentation of Māori in the police data could partly reflect a higher tendency of Māori victims to report incidents to the police; 39.9% versus 53.6% for Europeans based on the NZCVS data pooled across 2018–2024 survey cycles (Ministry of Justice, 2025).

However, the *Prevalence Survey Report* also reports the highest overall prevalence for Māori (22.6%) and the lowest for Asian older people (9.5%) (Meehan et al., 2026). This suggests that the higher prevalence observed for Māori in the administrative data reflects a genuine inequity, not only differences in data capture.

Figure 7: AOP prevalence by data source and ethnicity, 2022



AOP prevalence in administrative data, by Rainbow identity

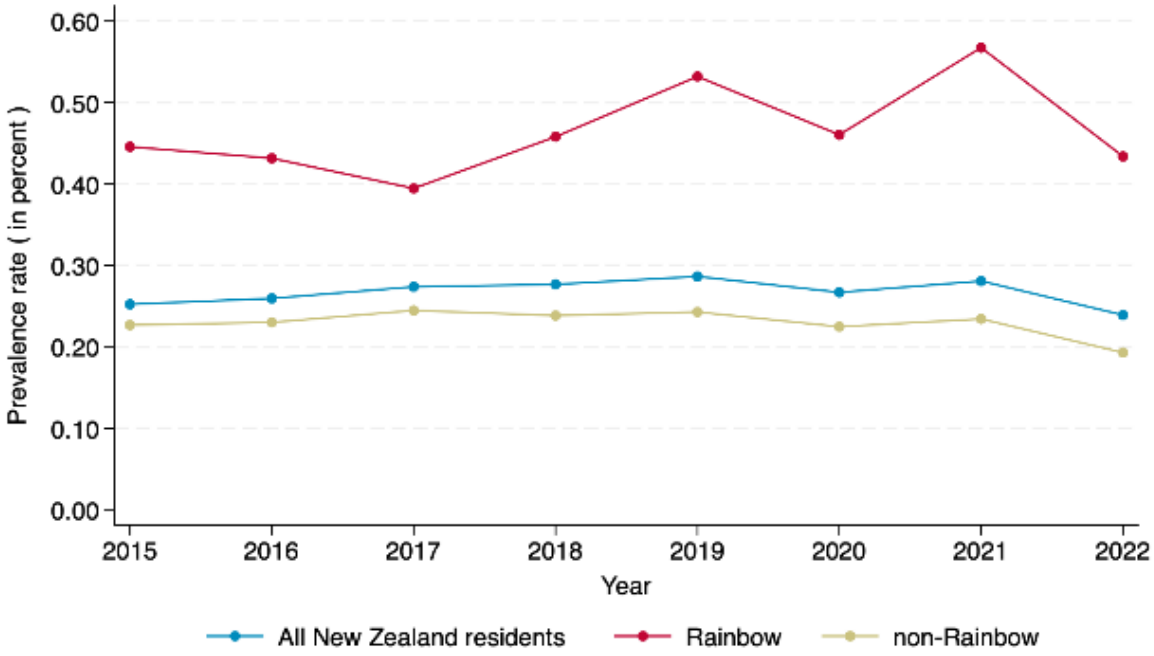
For this study, Rainbow is the umbrella term for sex, sexuality, and gender diversity.

As shown in Figure 8, the prevalence of AOP in Takatāpui and Rainbow[11] older New Zealanders is higher than in the non-Rainbow population. We are unable to breakdown the Rainbow population into subgroups due to small numbers for some groups.

This finding is consistent with the results from the *Prevalence Survey Report*, where the AOP prevalence rate was 28.7% for older people identifying as part of Takatāpui and Rainbow communities, compared with 16.5% for those not part of these communities (Meehan et al., 2026).

[11] We adopt the wording developed by Hohou Te Rongo Kahukura – Outing Violence (https://kahukura.co.nz/whakapapa/"The words we use").

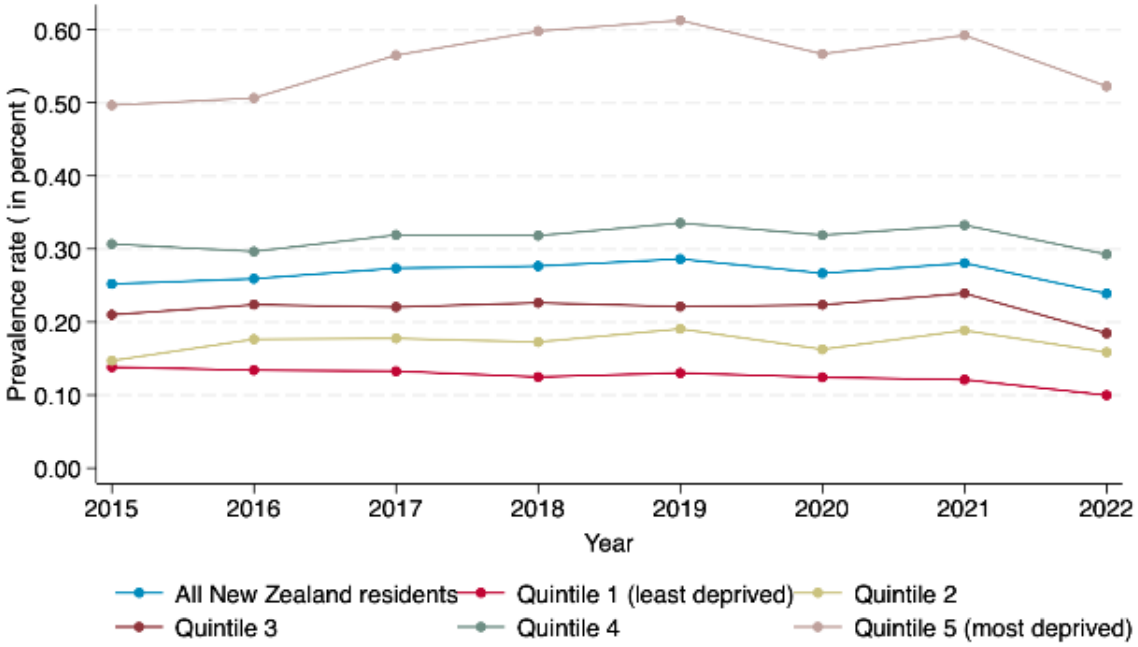
Figure 8: Overall AOP prevalence by Rainbow identity, 2015–2022



AOP prevalence in administrative data, by deprivation

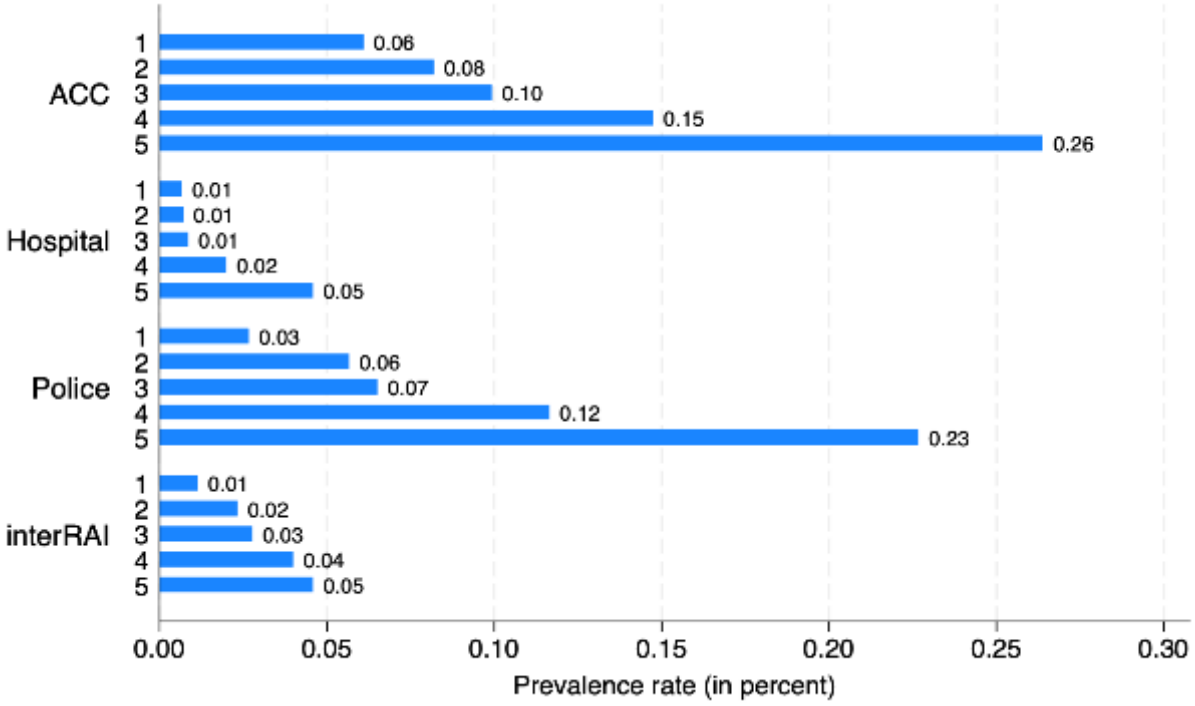
Older adults living in more deprived areas are more likely to experience AOP than those living in less deprived areas. As Figure 9 shows, this is consistent across the deprivation distribution and across the whole study period. Figure 10 shows this is also true for each source of data, but most extreme for police data, where those living in the most deprived areas experience AOP at around eight times the rate of those living in the least deprived areas.

Figure 9: Overall AOP prevalence by deprivation quintile, 2015–2022



Note: 1-5 indicate deprivation quintiles, with 1 being the least deprived and 5 being the most deprived.

Figure 10: Prevalence of AOP by data source and deprivation

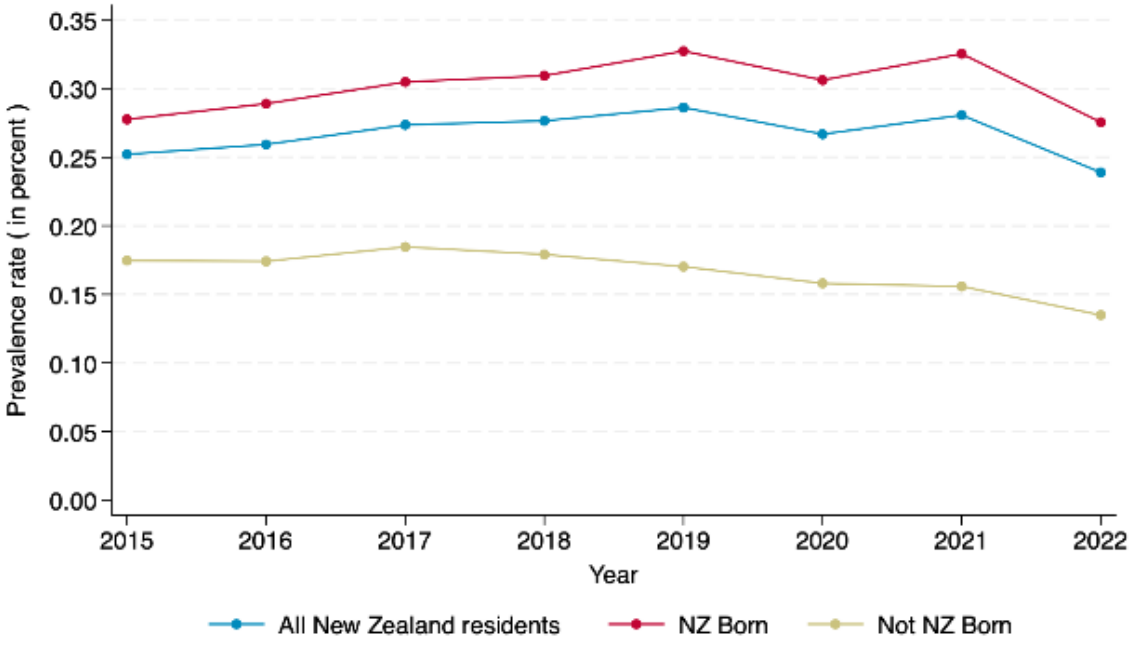


Note: 1-5 indicate deprivation quintiles, with 1 being the least deprived and 5 being the most deprived.

AOP prevalence in administrative data, by NZ birth status

AOP prevalence is lower among people born abroad than those born in NZ throughout the period (see Figure 11). This may reflect different levels of interaction with the public services that generate our data rather than actual differences in AOP experiences.

Figure 11: AOP prevalence by NZ birth status, 2015–2022



AOP prevalence in administrative data, by disability status

As Figure 12 shows, the prevalence of AOP for people with a disability is two to three times that of people without a disability throughout the study period (0.4% to 0.6% compared to about 0.2%). This pattern is present in all data sources but is most extreme in interRAI data (see Figure 13). This likely reflects that most people receiving an interRAI assessment have a disability or significant care needs, making them both more visible to the system and more vulnerable to neglect or other forms of harm.

Although the prevalence rates are much lower than the *Prevalence Survey Report*, the pattern of higher AOP among older people with a disability is consistent with the survey results; one in four (25.2%) older disabled people compared with 13.5% for non-disabled older people (Meehan et al., 2026).

Figure 12: Overall prevalence by disability status, 2015–2022

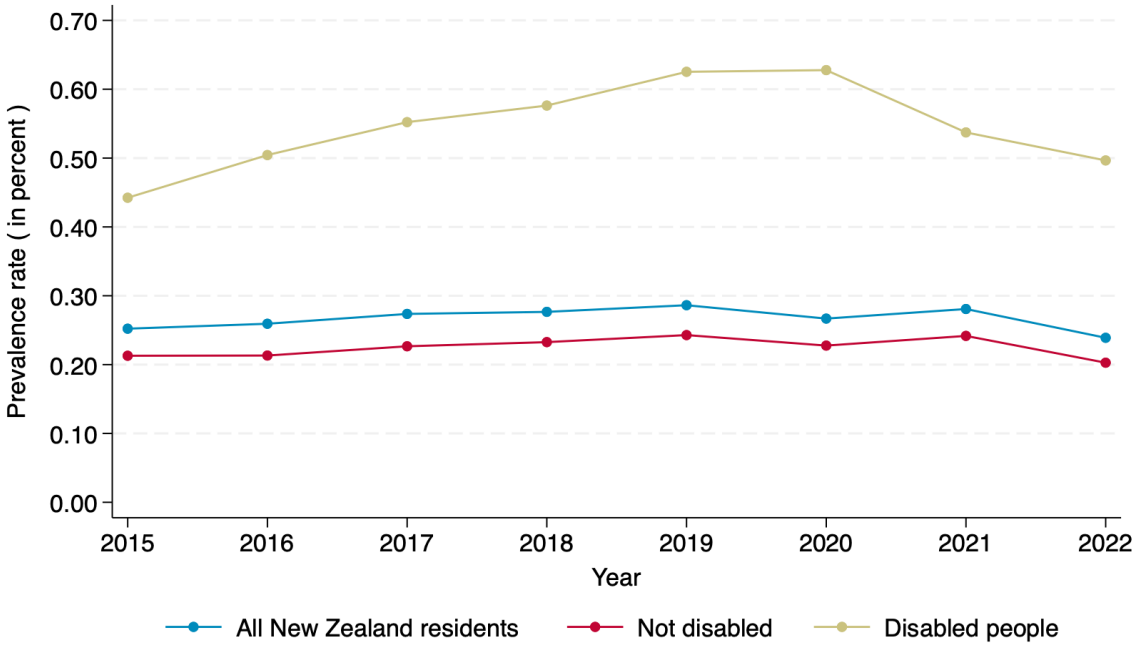
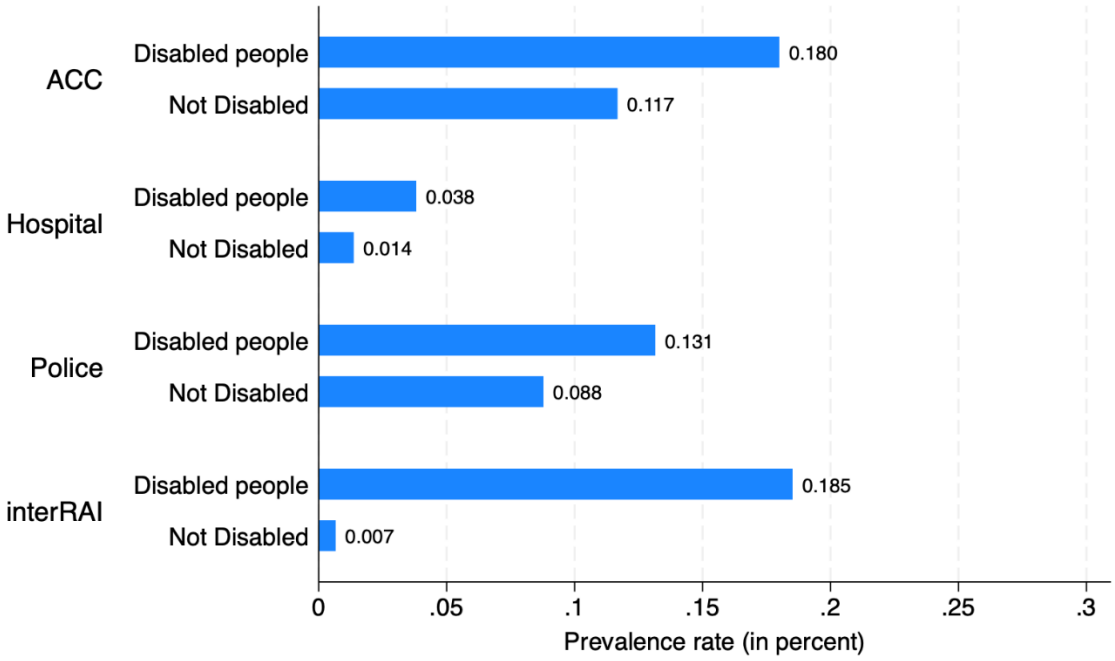


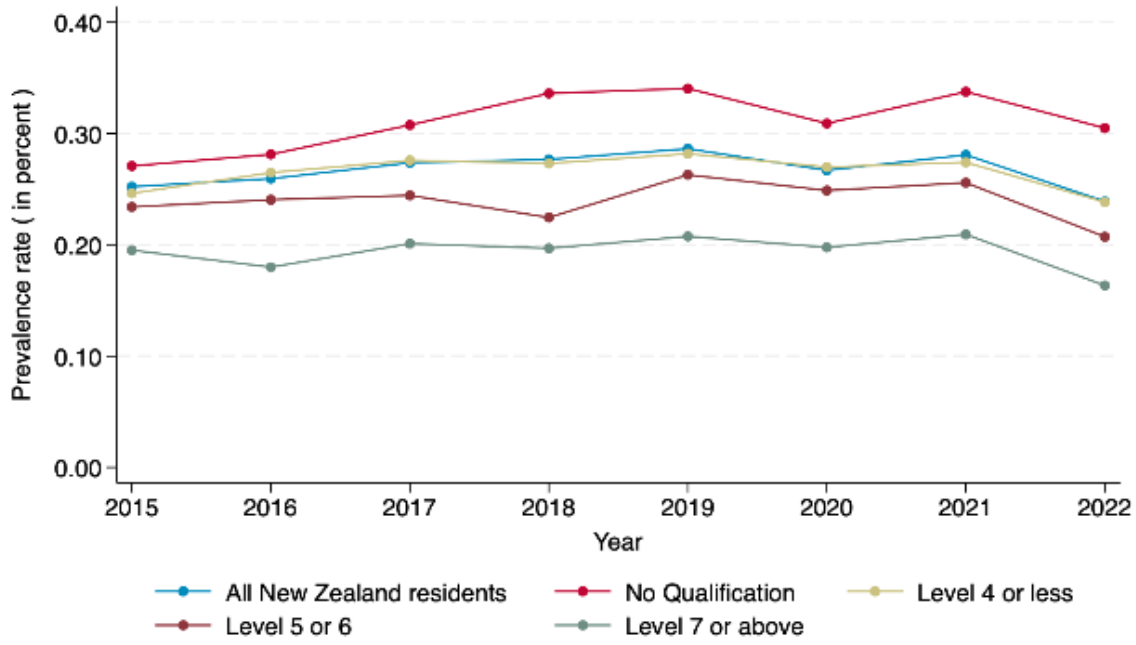
Figure 13: AOP prevalence by data sources and disability status, 2022



AOP prevalence in administrative data, by qualification

There is a relationship between qualifications and AOP prevalence. Figure 14 shows that those with no qualifications have the highest prevalence of AOP, while those with NZQF level 7 (a bachelor's degree) or above have the lowest prevalence.

Figure 14: Overall AOP prevalence by qualification, 2015-2022

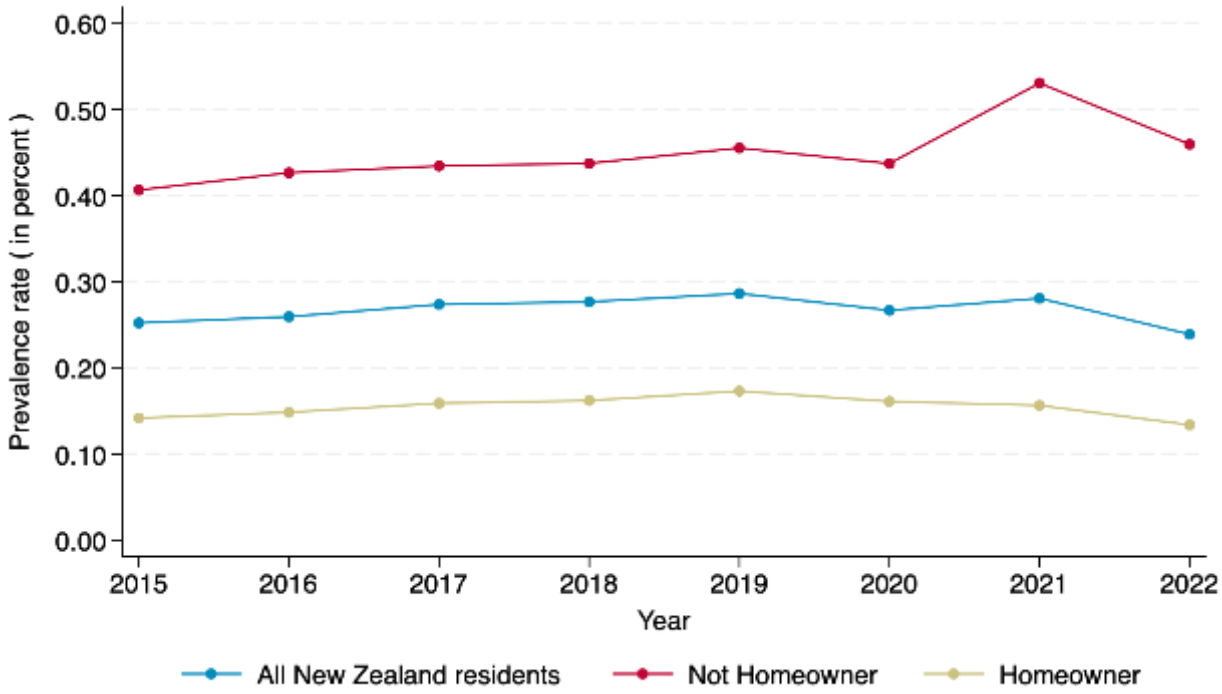


AOP prevalence in administrative data, by home ownership

AOP prevalence is notably higher in non-homeowners (around 0.4% to 0.5%) than home owners (0.10% to 0.15%) across the whole study period (see Figure 15). This difference may reflect the financial pressures and housing insecurity that non-homeowners are more likely to face. Renting or living in shared housing can increase dependence on others and the potential for conflict, while home owners may be more likely to have stable living arrangements and assets that provide some protection. At the same time, those under greater financial stress may have more contact with public services such as health and justice, which could increase the likelihood that incidents of harm are captured in the administrative data.

The *Prevalence Survey Report* also reports higher prevalence among non-homeowners (28.0%) versus home owners (14.4%) (Meehan et al., 2026).

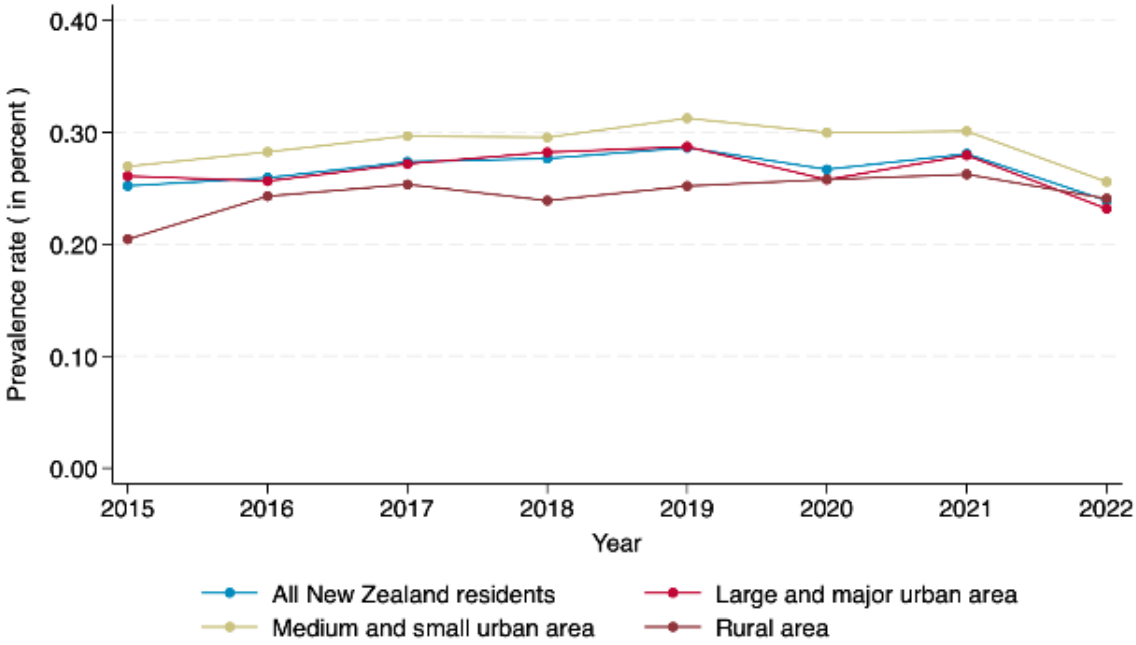
Figure 15: Overall AOP prevalence by home ownership, 2015–2022



AOP prevalence in administrative data, by urban-rural residence

As Figure 16 shows, there are differences in AOP prevalence between people who live in medium and small urban areas and those who live in large and major urban areas or rural areas. However, these differences are smaller than those across other demographic characteristics.

Figure 16: Overall AOP prevalence by urban-rural residence, 2015–2022



3.2 AOP prevalence in the NZCVS

We now examine the NZCVS results. As explained in Section 2, the NZCVS is examined separately to the administrative data sources as it is not possible to collate survey and administrative data into an overall AOP prevalence rate due to differences in coverage. In this section, we also compare results from the NZCVS and police data.

Prevalence of AOP in the NZCVS is about 4% in 2018, decreasing to 2.2% in 2022, as shown in Figure 17. Figure 18 shows the prevalence broken down into different categories, with data pooled across the five years. Harassment, threats, and theft are the largest categories, with a prevalence of about 0.9% during the period. Prevalence of assault (about 0.7%), burglary (about 0.5%), sexual assaults (about 0.4%), and cybercrime (about 0.2%) are lower, while cases of robbery are rare enough to be suppressed by Stats NZ to avoid identification of individuals.

Figure 17: NZCVS prevalence rate over time

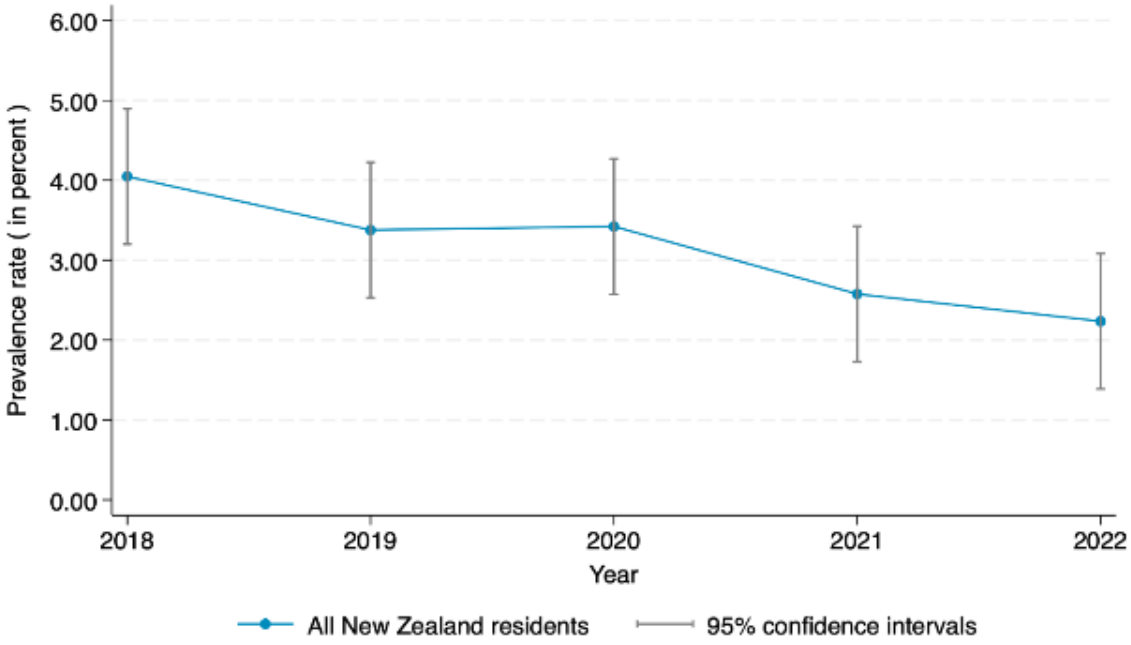
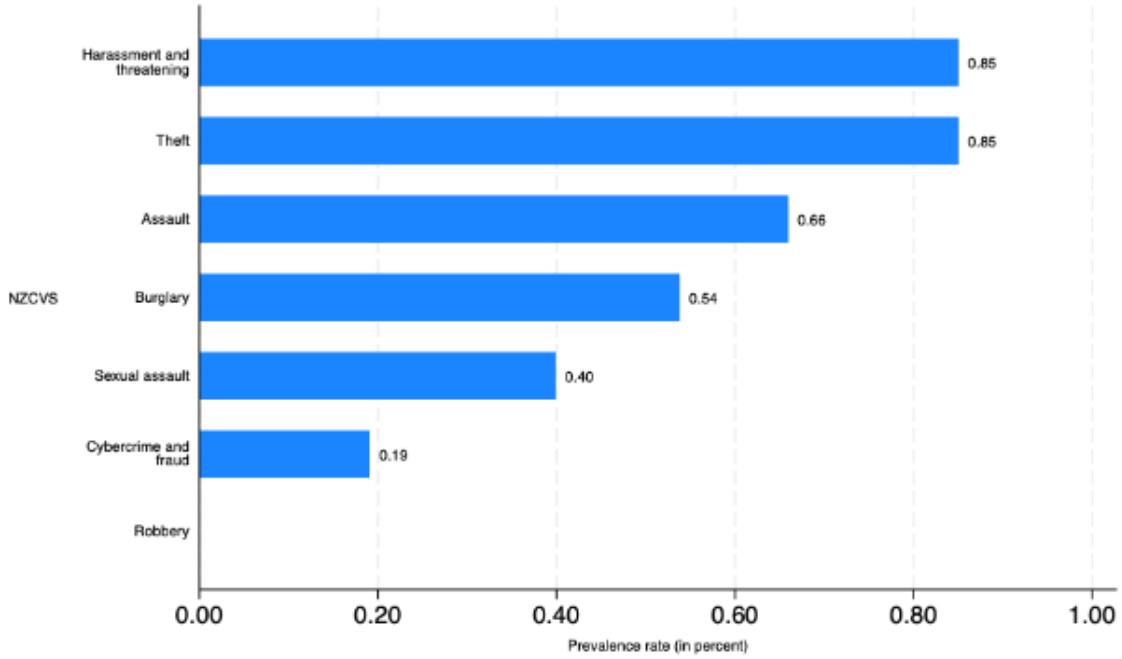


Figure 18: Offence types in NZCVS data

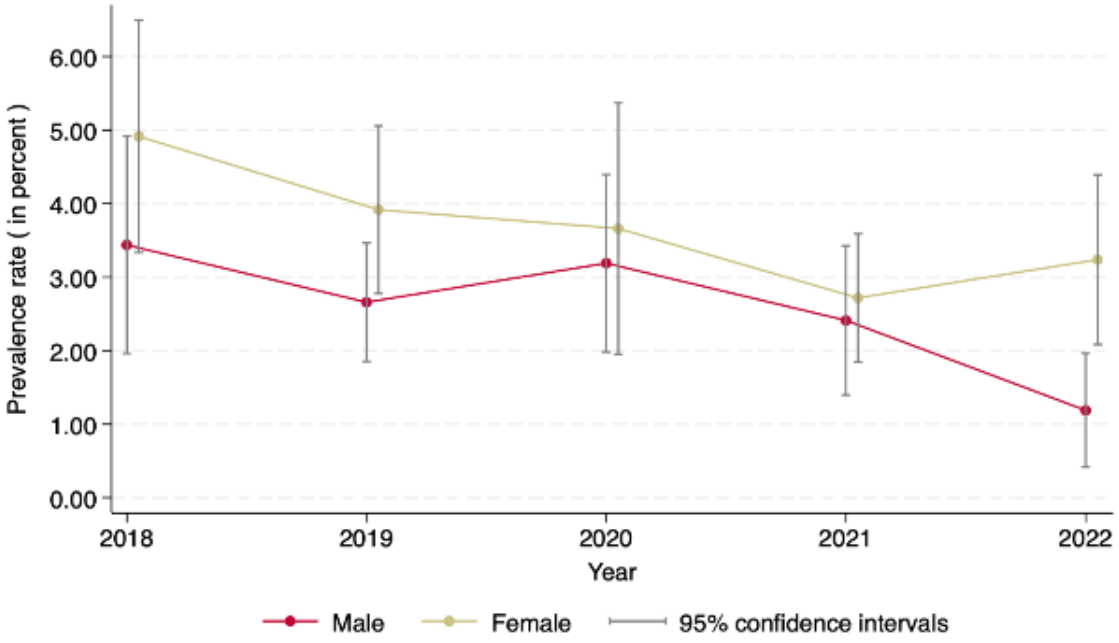


Note: Figures for 'Robbery' suppressed in accordance with Stats NZ confidentiality requirements.

Prevalence in the NZCVS, by gender

The NZCVS rates of AOP for men and women have been generally decreasing over time, although the rates for women started to increase again in 2022 (Figure 19). Moreover, the differences over time are not statistically significant. Women have higher rates of AOP than men in all years, although the difference is statistically significant only in 2022.

Figure 19: NZCVS prevalence over time and by gender

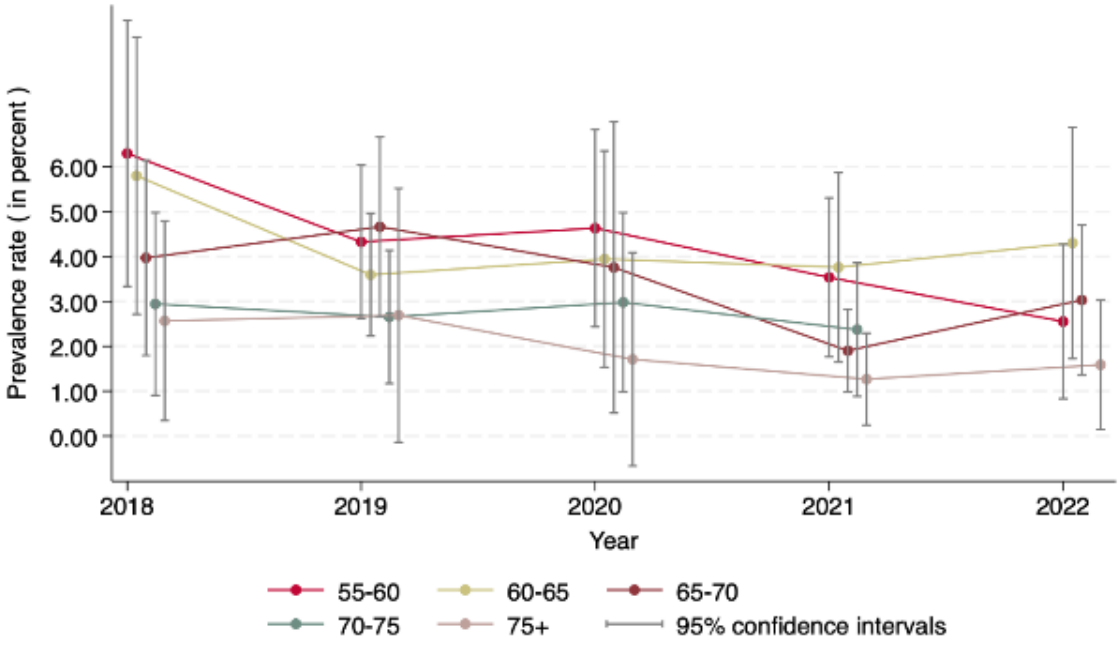


Prevalence in the NZCVS, by age group

Prevalence rates are generally decreasing for all age groups over time, except the 70–75 years age group (Figure 20). However, the underlying number of respondents in each age group tends to be small, particularly for the older age groups, thus reducing the robustness of these results.

Prevalence tends to decrease with age. Those in the 55–60 age group generally have the highest prevalence rates, while those in the 75–80 age group generally have the lowest. However, the differences are generally not statistically significant.

Figure 20: NZCVS prevalence over time and by age

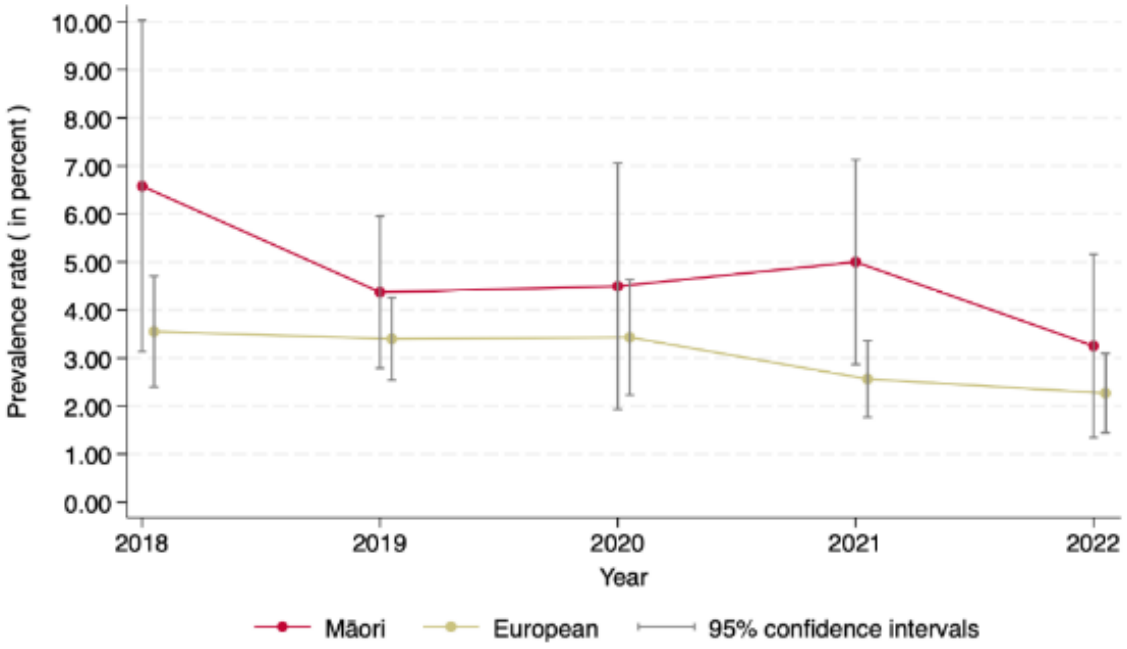


Notes: Grey vertical bars are 95% confidence intervals.

Prevalence in the NZCVS, by ethnicity

We present prevalence rates by ethnicity for Europeans and Māori only due to small underlying counts for other ethnic groups (Figure 21). As with the administrative measures of AOP, Māori have a higher prevalence rate than Europeans. However, the difference is not as large as with administrative data sources, and differences are not statistically significant.

Figure 21: NZCVS prevalence over time and by ethnicity



3.3 Comparing NZCVS and police data

Prevalence of AOP in the NZCVS is about 25–31 times higher than prevalence measured using police data. However, there are important differences in the two data sources. In addition to being survey rather than administrative data, these include:

1. The NZCVS includes events that were both reported and not reported to the police.
2. No unlawful entry/burglary/breaking-and-entering incidents within the police victimisations data is recorded as having an offender who is known to the victim.
3. The police dataset does not have an offence code that corresponds to harassment and threatening behaviour (although some of these incidents may be coded as assault).

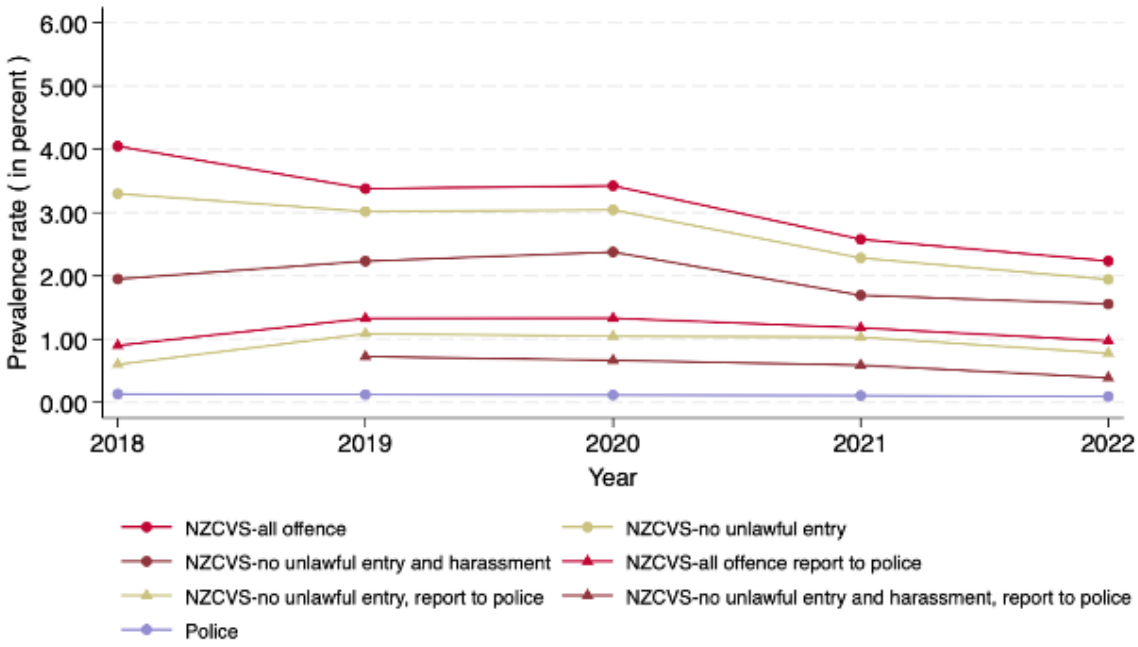
To make comparisons between the NZCVS data and police records, we use subsets of the NZCVS data by excluding incidents that would not be in the police data because of 2 or 3 above. We also need to consider whether events in the NZCVS data were reported to police. Applying these additional criteria to include events in the NZCVS data leads to six prevalence estimates, as shown in Table 4.

Table 4: NZCVS offence categories for comparison with police records

All AOP offences	Combined with…	Reported to police or not
All AOP offences except unlawful entry/burglary/breaking and entering		
All offences except unlawful entry/burglary/breaking and entering and harassment and threatening behaviour		

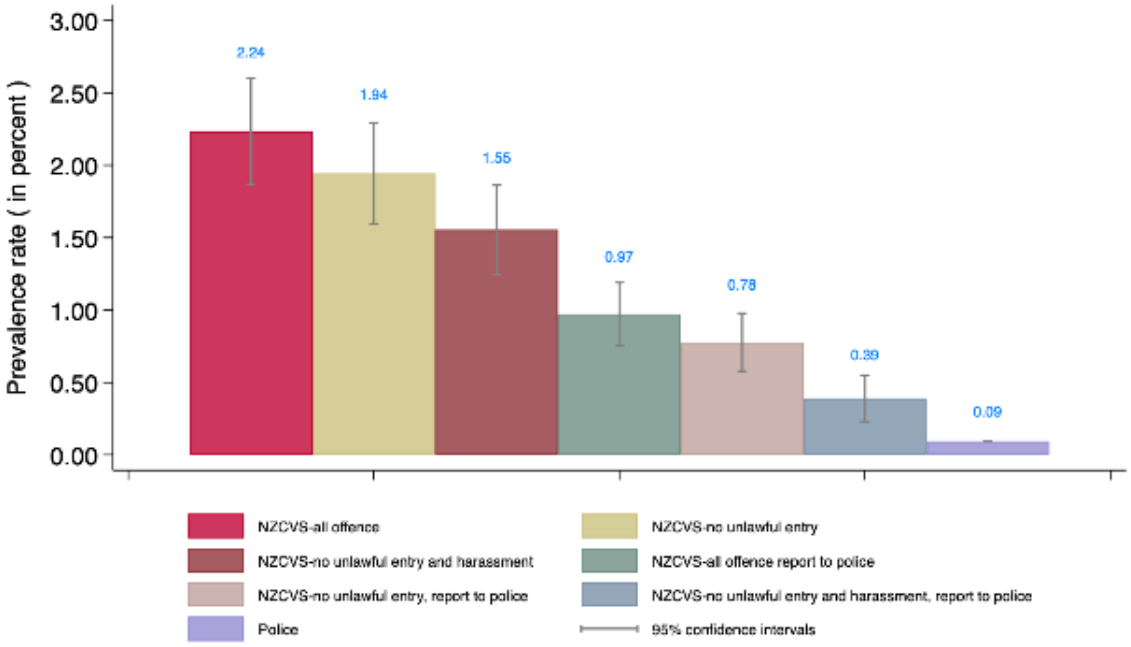
Figure 22 shows these six AOP prevalence rates based on NZCVS cycle 1 (2018) to cycle 5 (2022). Note that the year used here refers to the NZCVS data rather than the NZCVS cycle. For example, 2022 contains all respondents whose survey month was between July 2021 and June 2022. The figure also shows the prevalence rate in the police data for comparison.

Figure 22: NZCVS versus police AOP prevalence over time



Even applying the additional criteria to the NZCVS data, the prevalence estimate remains noticeably higher than the prevalence from the police data. Figure 23 shows this more clearly for 2022, with prevalence calculated using the most restrictive criteria on cases in the NZCVS still more than four times higher than the prevalence rate from the police data. Indeed, many people who say that their victimisation was reported to police in the NZCVS do not appear in the police victimisations data.

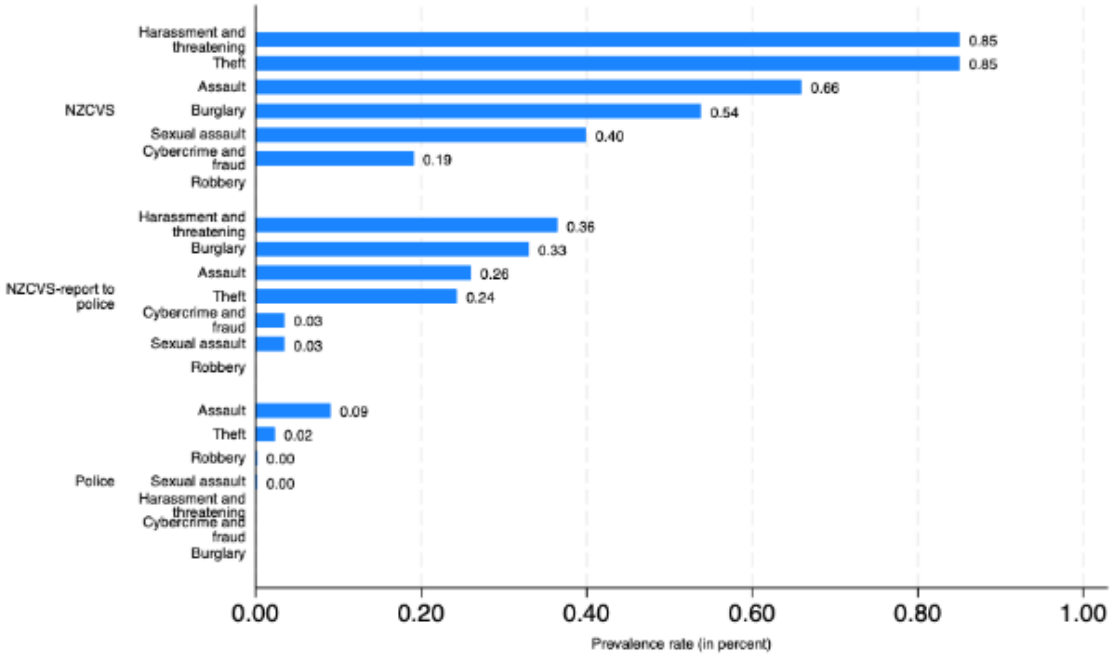
Figure 23: AOP prevalence rate: NZCVS versus police data, 2022



To examine the difference between the NZCVS and police data prevalence rates in more detail, Figure 24 compares the two by offence group. However, some of the offences have low numbers of respondents with events that were reported to the police in the NZCVS, and thus prevalence rates for these groups are suppressed to comply with Stats NZ confidentiality rules.

As expected, prevalence in each category is higher in the NZCVS data than in the police data. More surprising is the importance of each offence category in the two data sources. In the NZCVS data, burglary is second only to harassment (which is not included in police data) in size; in the police data cases of burglary are rare enough that cases are suppressed.

Figure 24: AOP prevalence rate: NZCVS versus police data, by offence group



Part of the reason for discrepancies between the two data sources may be that the police victimisations data in the IDI only includes incidents recorded as offences. Not all incidents reported to police will rise to this level; in some cases, police attendance at an incident alone may be considered a sufficient response, and in others there will be a lack of evidence to support a claim.

As noted, administrative data and the NZCVS both under-capture forms of AOP that are not offences, particularly psychological abuse and some forms of neglect. These types of harm are widespread and harmful but are less visible in current data sources. Future monitoring could be strengthened by developing indicators that capture these experiences (e.g. through health and social service assessments, or by expanding survey tools to include a wider range of psychological and relational harms).

4 METHODS: IMPACT OF AOP

This section describes the outcomes we analyse for people who experienced AOP and for comparison groups. We consider a wide range of health, income, employment, and mortality outcomes, using linked administrative data in the IDI. We use linear probability models to estimate differences in binary outcomes (such as hospitalisation, prescription, and employment) and ordinary least squares (OLS) regression for continuous outcomes (such as income amounts).

4.1 Identifying cases

For our impact analysis, we need to identify individual incidents of AOP. This is not feasible in the interRAI data as it only provides the *risk of* abuse. Nor is the NZCVS useful because it does not provide the exact dates of an incident and only includes a sample rather than the whole population. We therefore begin with identifying incidents in hospital discharge data, ACC data, and police victimisations data as described in Section 2.

AOP incidents include different types of abuse, and these may differ in how they affect outcomes (e.g. assault may affect mental health differently than theft). We thus categorise AOP incidents into three types: sexual assault, physical assault, and robbery and theft, as shown in Table 5.

Table 5: Categorisation of incident type in IDI datasets

	Police victimisations	ACC	Hospital
Sexual assault	ANZSOC offence code 0311, 0312: aggravated sexual assault; non-aggravated sexual assault	Sexual abuse, Sexual assaults at home, Sensitive claims	Sexual abuse, Sexual assaults by people known to the victim
Physical assault	ANZSOC offence code 0211, 0212, 0213: serious assault resulting in injury; serious assault not resulting in injury; common assault	Physical abuse, Physical assaults at home	Physical assault by people known to the victim
Robbery and theft	ANZSOC offence code 0811, 0812, 0813, 0821 0823, 0829, 0841: theft of a motor vehicle; illegal use of a motor vehicle; theft of motor vehicle parts of contents; theft		

	Police victimisations	ACC	Hospital
	from a person (excluding by force); theft from retail premises; theft (except motor vehicles), not elsewhere classified; illegal use of property (except motor vehicles)		

We include all incidents between Q3 2015 and Q2 2019. The Q3 2015 start allows us to observe all data for a full year prior to the incident, with police victimisations data only available from July 2014. The endpoint of Q2 2019 allows us to construct a comparison group of people who experience AOP later (see Section 4.2 under the heading "Later AOP group") and follow people with an AOP incident as recently as Q2 2022.

A single incident may fit the definition of more than one type. In such cases, we assign the type of incidents according to the priority order: sexual assault, physical assault, robbery and theft.[12] After assigning each incident to a type, the incident type distribution is as shown in Table 6. Over two-thirds (69%) of all incidents were physical assaults.

Table 6: Distribution of AOP incidents

Type of incidents	Number of incidents	Share among all incidents (%)
Sexual assault	5,079	20.3
Physical assault	17,121	68.6
Robbery and theft	2,730	10.9
Other kinds of incidents	45	0.2

A given incident could create a record in more than one data source. We address this by treating incidents separated by up to 30 days as being a single incident.[13]

It is possible for victims to have experienced AOP on more than one occasion. As shown in Table 7, most older people (91%) experienced only one incident during the study period. This does not imply that ongoing AOP is rare, but just that incidents that meet our criteria and can be observed within the IDI are in most cases one-offs, regardless of the underlying pattern of abuse.

[12] An alternative method is to define seven types of incidents based on whether they involved sexual assault, physical assault, and/or robbery or theft. This categorisation, however, would lead to small size of certain types of incidents. We therefore choose to assign the type based on the most potentially impactful aspect of the incident.
[13] It is possible that we combine truly multiple incidents into one incident in this step. This is not a problem because we later analyse outcomes at the quarter level (i.e. everything that happens within the same quarter is grouped together).

Table 7: Number of incidents per victim

Number of incidents	Number of people	Share (%)
1	20,232	90.6
2	1,695	7.6
3	282	1.3
4	78	0.3
5+	36	0.2

Our methodology for analysing the impact of AOP incidents on welfare outcomes (see Section 4.4) requires that for a given incident, there was no incident in the 12 months prior. We therefore exclude incidents that do not meet this requirement, which account for 5.3% of incidents. This criterion avoids overlap between groups in the analysis. Specifically, we use a "Later AOP group" as a comparison group for those who experience AOP. If someone in the comparison group had already experienced an incident in the prior 12 months, they could end up in both the treatment and comparison groups. Excluding such cases ensures a cleaner distinction between the two groups.

We can now uniquely identify every incident in our analysis by (i, j, q) where i is the person, j is the type of incident, and q is the calendar quarter (e.g., Q1 2016).

4.2 Comparison groups

By identifying incidents of AOP, we also identify people who experience AOP. We then need to create a comparison group. In fact, we create four comparison groups, shown in Table 8 and described below.

Each of the four comparison groups provides a different point of reference. The "Later AOP group" is our main comparator. It includes people who experience AOP later in life and is valuable because it helps control not only for observable characteristics (like age, gender, deprivation, or location) but also for some unobservable ones, such as relationship patterns or underlying vulnerabilities. The Matched group provides a comparator based only on observable characteristics, created using propensity score matching. The Age-and-Gender Matched group provides a general population benchmark. Finally, the Stranger Violence group allows us to compare AOP incidents with similar incidents committed by strangers, testing whether breaches of trust carry additional impacts beyond the incident itself.

Table 8: Comparison groups

Group	Description	Purpose
(1) AOP	Older people who experience AOP incidents	Group of interest
(2) Stranger violence	Older people not in group 1 who experience sexual assault, physical assault, robbery and theft conducted by strangers	Tests whether harm by someone in a trusted relationship has additional impacts compared to similar incidents by strangers
(3) Matched	Older people who are not in groups 1 and 2 and are matched with group 1 by demographic variables using propensity score and nearest-neighbour matching	Provides a comparator based on observable characteristics
(4) Later AOP	Older people who will go on to experience AOP incidents three years later	Controls for both observable and unobservable characteristics, making it the preferred comparator for outcome analyses
(5) Age and gender matched	Older people who are randomly selected from the population but matched to group 1 on age and gender.	Provides a general population reference point

Stranger violence group

A key feature of our AOP definition is that the abuse was committed by someone in a trusted relationship with a victim. However, not all incidents of sexual assault, physical assault, and robbery and theft are committed by someone known to the victim. A comparison group that experiences similar incidents to those experienced by AOP victims, but with those incidents involving strangers, allows us to validate our definition which assumes there is something harmful about the violation of a trusting relationship, over and above the harm of the incident itself.

To identify this group, we identify incidents meeting similar criteria to those described in Table 5, modified in the following ways:

- In the police victimisations data: person responsible for harm are recorded as “strangers”
- ACC records of physical and sexual assaults: incidents did not happen at home; sensitive claims are not included
- Hospital records of sexual and physical assaults: clinical code description of person responsible for assault is not spouse, partner, parent, family member, carer, acquaintance, or friend.

Matched group

This group is used to create a comparison set that is similar to the AOP group for observable demographic and socioeconomic characteristics, helping to reduce confounding.

We select a group of people who are not in the AOP or stranger violence groups but share similar demographic characteristics with the AOP group. This is undertaken in two stages. First, we create a candidate pool comprising people who share the same birth year, gender, territorial authority (city/district councils), and deprivation decile for each member of the AOP group.

Next, we create a propensity score to identify people in the candidate pool who most closely resemble members of the AOP group. We describe how the propensity score is created in more detail in Appendix 1. Briefly, we identify a number of characteristics that are associated with experiencing an AOP incident, and people who have more of these characteristics have higher propensity scores, while people who have fewer characteristics have lower propensity scores.

Once we have a propensity score for the AOP group and members of the candidate pool, for each member of the AOP group we choose a member of the candidate pool with the closest propensity score.

Later AOP group

Theoretically, the "Matched" group should be similar to the AOP group in terms of observable characteristics. However, AOP victims may differ in some unobservable characteristics, like, for example, their relationships with family members. One way to create a comparison group who might be more similar to AOP victims for unobservable characteristics is to select people who experience AOP incidents later in their lives. The logic is that people who will eventually experience AOP incidents are similar in both observable and unobservable characteristics with the timing being random. Such reasoning has been adopted in studying health shocks such as heart attacks and strokes (Fadlon & Nielsen, 2019). In the case of AOP, it is not obvious that the timing of incidents can reasonably be considered random in the same way the timing of a health shock can. We compare how similar the "Later AOP group" and the Matched group are to the AOP group later in this section (see *Sample characteristics* below).

We use the "Later AOP group" as the main comparator for outcome analyses because this group is likely to share both observable and some unobservable characteristics with the AOP group, reducing the risk of confounding. In contrast, the Matched group is created based only on observable characteristics. Using Later AOP as the primary comparator helps us to account for factors that are otherwise difficult to measure in the administrative data, such as relationship quality or social support.

To create the "Later AOP group", we first categorise the AOP group according to birth year, with categories 1931-35, 1936-40 and so on to 1956-61. Within each birth year group, we further group together those who experience the same incident type. The "Later AOP group" is comprised of people who experience an AOP incident three years (12 quarters) later than another person in the same birth

year-incident type bucket. Any cases where a person is matched to themselves are dropped from the "Later AOP group".

Age and gender matched group

Our final comparison group allows us to compare AOP victims to a representative sample of the population. This group is used to compare AOP victims with a representative sample of the wider population who share only basic characteristics of age and gender. For each AOP victim who experienced incident type j in quarter q, we construct a candidate pool which consists of all older people who share the same birth year and gender as this victim. We then select three people at random from each candidate pool.

Sample characteristics

We drop from the sample records with missing deprivation index decile or territorial authorities, as we use these as covariates in our regression.

Table 9 shows the sample sizes for the AOP and comparison groups. Each incident type is effectively a separate sample. AOP and Matched sample sizes are the same, as one match is selected for each incident. The "Later AOP group" is smaller than the AOP group because people are generally less likely to experience AOP incidents we can detect in the IDI as they grow older. The Age-and-Gender Matched group is approximately three times the size of the AOP group because three matches were selected for each incident, but is not exactly three times the size because some matches were dropped due to missing deprivation index decile or territorial authority information.

Table 9: Sample sizes in AOP and comparison groups

	Sexual assault	Physical assault	Robbery and theft
AOP	1,851	6,732	1,287
Stranger violence	126	5,556	38,880
Matched	1,851	6,732	1,287
Later AOP	1,719	5,118	780
Age-and-Gender Matched	5,550	20,169	3,855

We compare the AOP and Stranger Violence groups with the Age-and-Gender Matched group with two goals in mind. First, we want to understand if the AOP and Stranger Violence groups are similar in socioeconomic and demographic characteristics to a representative older people population. Secondly, we want to know whether the defining feature of AOP (that the person responsible for harm is someone

the victim knows) distinguishes a specific group of victims in terms of observable socioeconomic characteristics, even though AOP and stranger violence victims experience similar types of incidents.

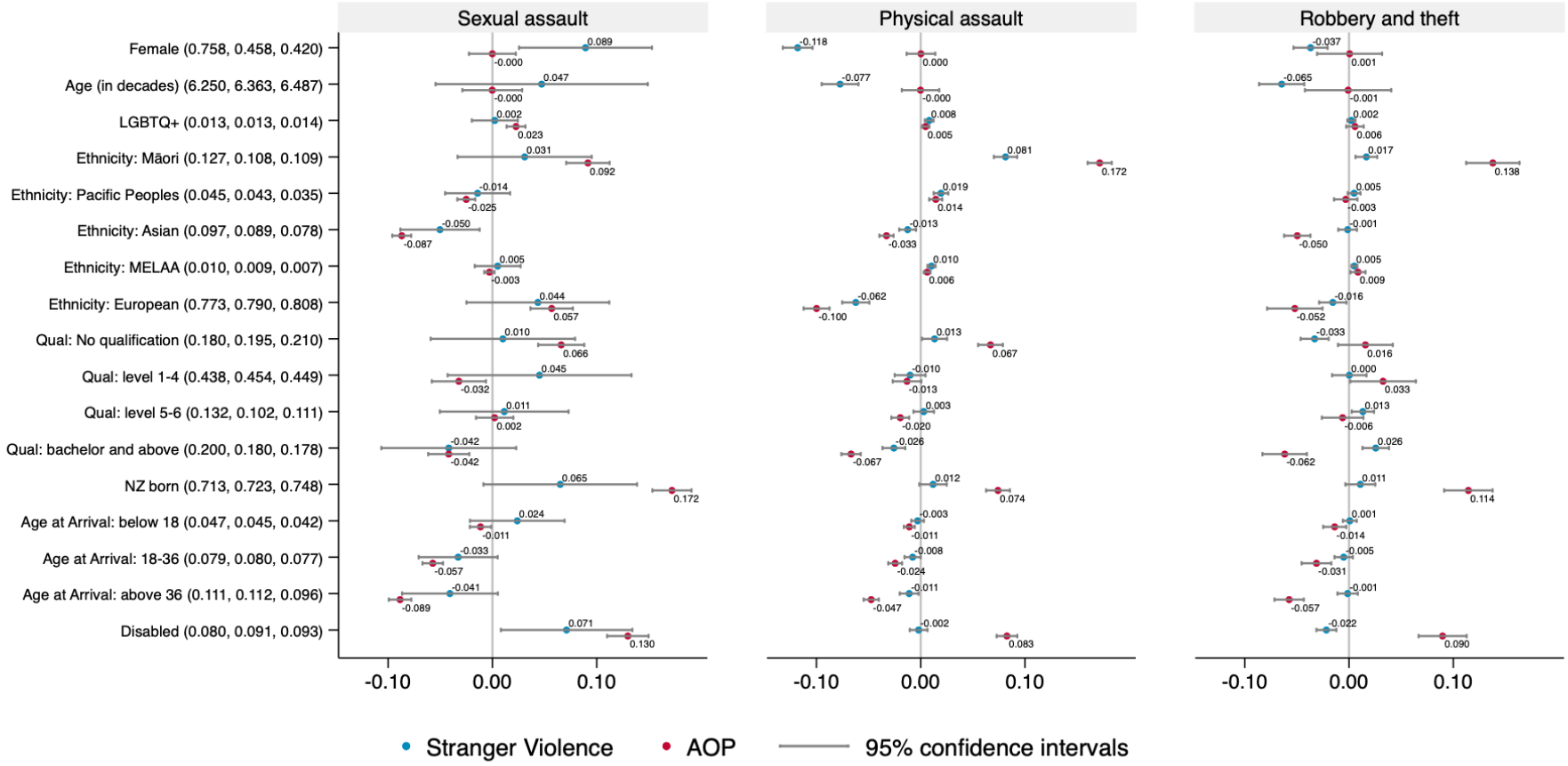
We compare the groups in three sets of characteristics:

- Demographic: gender, Rainbow identity, ethnicity, qualification, NZ-born status and age at arrival for migrants, and disability status
- Economic: home ownership, deprivation index decile, amount of income from various sources
- Welfare: victimisation, hospitalisation, and mental health prescription.

Income and welfare outcomes are measured a year before the incident. For example, if an AOP victim experienced an incident in June 2017, we would use the income during July 2015–June 2016. For the Age-and-Gender Matched group, we use the same time periods as the AOP or Stranger Violence group.

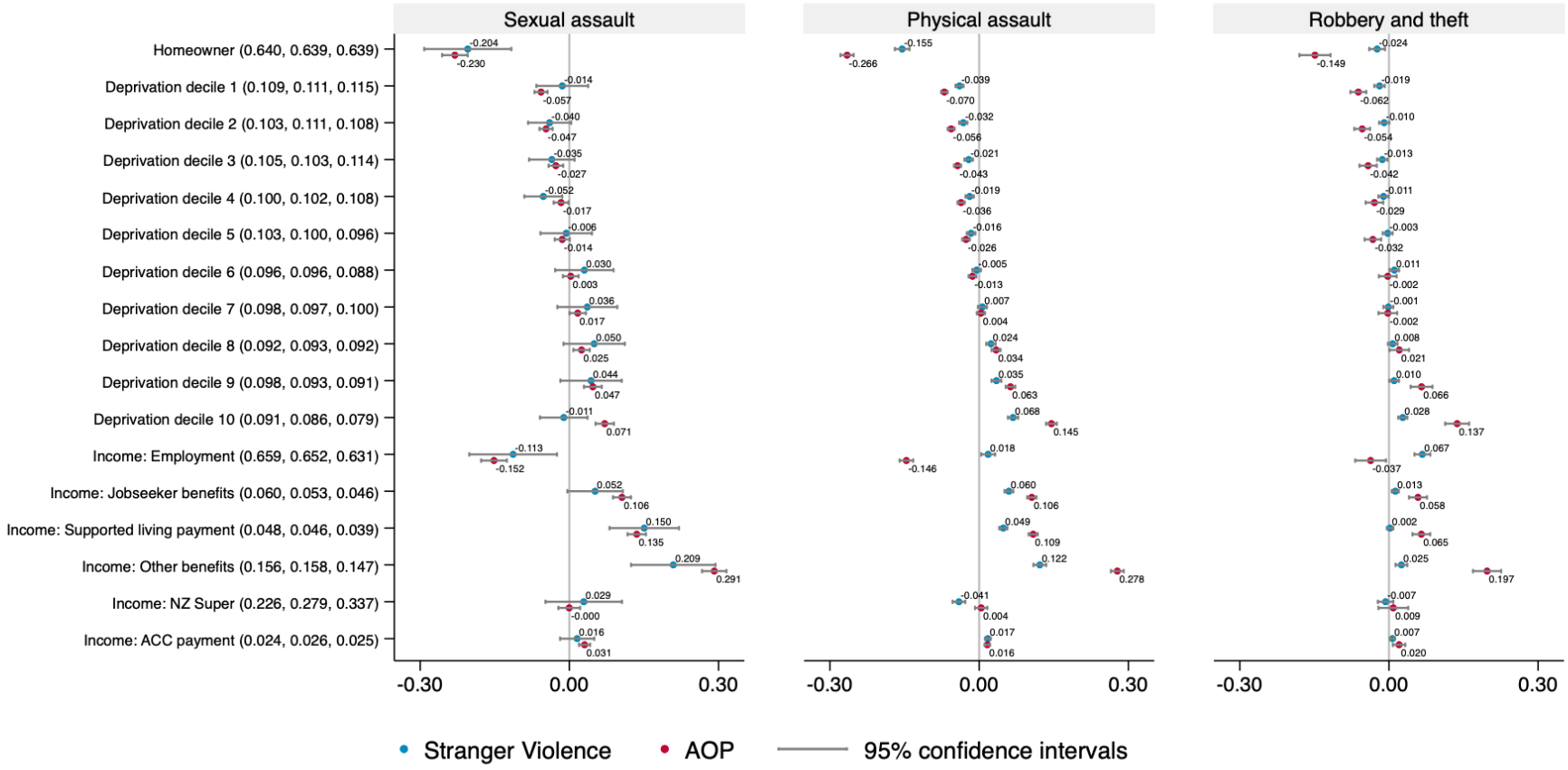
For each characteristic and type of incident we estimate a regression equation (see Appendix 2 for technical detail). Figure 25, Figure 26, and Figure 27 show the results of these regressions. In these figures, the point estimates shown are the percentage point differences in probability of a given characteristic for binary variables (e.g. being a member of a given ethnic group) or the difference in mean for continuous variables (e.g. income) between the AOP/Stranger Violence groups and the Age-and-Gender Matched group. Y-axis labels show the probability/mean for the Age-and-Gender Matched group.

Figure 25: Comparison of demographic characteristics of AOP and Stranger Violence groups with Age-and-Gender Matched group



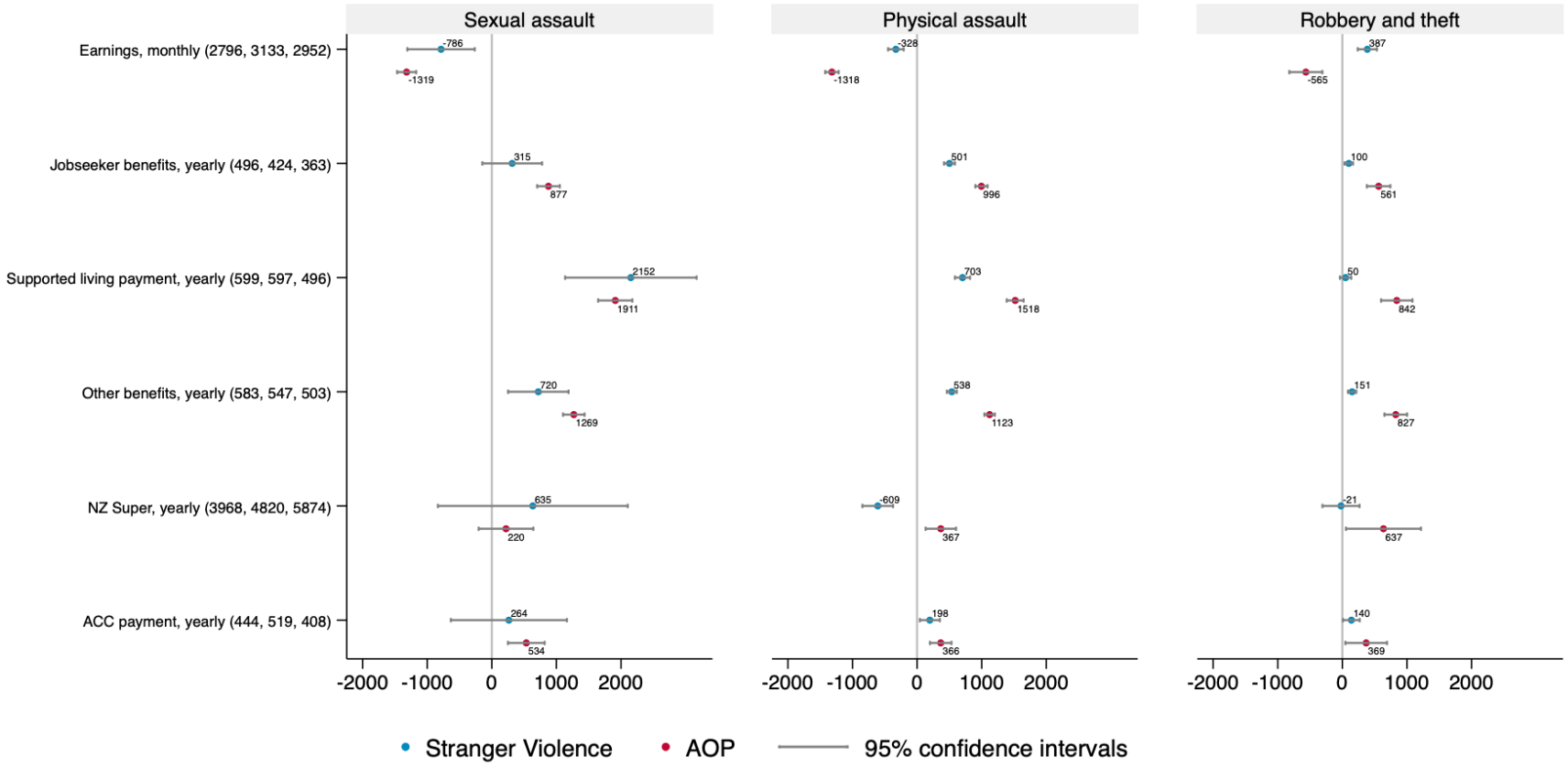
Note: Numbers in parentheses show the mean of the variable for the Age-and-Gender Matched group corresponding to the sexual assault, physical assault, and robbery/theft victims. Point estimates show the differences relative to the Age-and-Gender Matched group.

Figure 26: Comparison of economic characteristics of AOP and Stranger Violence groups with Age-and-Gender Matched group



Note: Numbers in parentheses show the mean of the variable for the Age-and-Gender Matched group corresponding to the sexual assault, physical assault, and robbery/theft victims. Point estimates show the differences relative to the Age-and-Gender Matched group.

Figure 27: Comparison of welfare characteristics of AOP and Stranger Violence groups with Age-and-Gender Matched group



Note: Numbers in parentheses show the mean of the variable for the Age-and-Gender Matched group corresponding to the sexual assault, physical assault, and robbery/theft victims. Point estimates show the differences relative to the Age-and-Gender Matched group

If all three groups were similar in the demographic, economic, and welfare characteristics of interest, the charts would show most estimates close to zero, which is not the case for all characteristics.

Figure 25 shows that AOP victims are more likely to be Māori or European, and less likely to be Asian or Pacific peoples, than the representative population. They are also more likely to be born in NZ, and to be disabled. For AOP victims of sexual and physical assaults – but not robbery and theft – the AOP group is more likely to have no qualifications.

Figure 26 shows that AOP victims tend to be in worse economic circumstances than the Age-and-Gender Matched group – they are more likely to live in more deprived areas, have lower employment income and higher benefit income, and are less likely to be home owners for all incident types. We also see some economic differences between the AOP group and the Stranger Violence group, with the Stranger Violence group more closely resembling the Age-and-Gender Matched group.

In comparing the Stranger Violence and AOP group, we see some differences. AOP victims of physical assault and robbery and theft have lower income from employment, and higher income from benefits, than do victims of Stranger Violence. AOP victims also tend to have greater likelihood of mental health prescriptions, hospitalisations, and victimisations in the previous year. AOP victims are much more likely to be disabled, although the confidence interval for disability among Stranger Violence sexual assault victims is quite wide. In general, the AOP group appears to be less advantaged across a range of observable measures.

We can also compare across the three types of incidents. In general, victims of each type of incident are similar in that they differ from the Age-and-Gender Matched group in the same direction. One exception is in the distribution of ethnicity, where victims of sexual assaults are less likely to be Pacific peoples and more likely to be European, while among victims of physical assault and robbery and theft the reverse is true.

4.3 Outcomes

We assess impact on 12 health and economic outcomes, which is described in detail in Table 10.

Table 10: Outcomes for measuring the impact of AOP

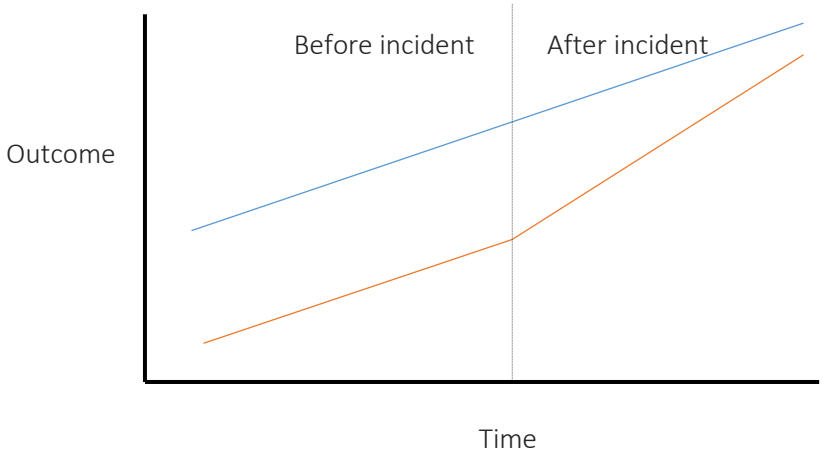
Outcome	Definition or measure
Mortality	Binary indicator of whether a person is dead in the relevant quarter.
Mental health prescription	Following the definition of Bowden et al. (2020), we use the 'Chemical IDs' assigned to each dispensing to identify medications most likely to treat anxiety, depression, emotional problems, bipolar disorders, substance problems, eating problems, disruptive behaviours, psychosis, personality disorders, sleep problems, self-harm, and other mental health problems. Binary indicator of dispensing of any relevant medication in the relevant quarter. A limitation of this outcome is that some medications classified as "mental health prescriptions" are also prescribed for physical health conditions (e.g. antidepressants used for chronic pain). This means the outcome may not perfectly capture mental health treatment.
Victimisation	Binary indicator of any offence recorded in the police victimisations data (not limited to AOP incidents) in the relevant quarter.
Hospitalisation	Binary indicator of any inpatient records in public or private hospitals.
Ambulatory sensitive care hospitalisation (ASH)	Binary indicator of any hospital event that could potentially have been avoided by the provision of appropriate health interventions and early disease management in primary care and community-based care settings.
ACC income	Any income from ACC payments in the relevant quarter. Income is recorded monthly and aggregated up to get a quarterly figure.
ACC payments	Binary indicator of receipt of ACC payments in the relevant quarter.
Benefit income	Any income from benefits, not including NZ Super, in the relevant quarter. Income is recorded monthly and aggregated up to get a quarterly figure.
Benefit payments	Binary indicator of receipt of benefit income, not including NZ Super, in the relevant quarter.
Earnings	Any income earned from employment in the relevant quarter. Income is recorded monthly and aggregated up to get a quarterly figure.
All income	Income from all sources in the relevant quarter. Income is recorded monthly and aggregated up to get a quarterly figure.
Employment	Binary indicator of receipt of any income from earnings in the relevant quarter.

4.4 Analytic approach

For each incident type, we fit a model which regresses the outcome of interest on which group someone is in (AOP, Later AOP, etc), indicators for quarter and year, and controls for a range of individual characteristics.[14] Technical details of these models are provided in Appendix 3. The models for mortality differ slightly from those for other outcomes; by definition, people must be alive to experience the incident and so the period covers the quarter of the incident and the following seven quarters (Q0 to Q7). For other outcomes, we are interested in what happened before the incident so we can observe whether there was a change in trend associated with the incident, and so the analysis period covers the four quarters before the incident and the seven quarters after the incident.

These regressions produce estimates of the percentage point difference in probability of the outcome (for binary outcomes, like mortality) or the difference in mean (for continuous outcomes, like income) that the AOP group experiences relative to a counterfactual. We calculate this from what we observe in both groups before the reference quarter and the comparison group after the reference quarter. For these estimates to reflect the impact of AOP (as opposed to spurious associations), we need to assume that the trend in outcomes over time for the AOP group and the comparison group are parallel before the incident, and would have continued to be after if not for the incident. The first part of this assumption – that the trends were parallel before the incident – can be tested empirically, while the assumption that the trends would have continued to be parallel if not for the incident cannot. The parallel trends assumption is illustrated in Figure 28.

Figure 28: Illustration of the parallel trends assumption



[14] These include a mix of time varying and time invariant characteristics, namely: gender, prioritised ethnicity, home ownership interacted with deprivation index decile, qualification level, age, and age squared.

Results with Later AOP as the comparison group are presented in Section 5. For mortality analyses, the "Later AOP group" cannot be used because; by definition, these individuals must survive for at least three years to be included. Instead, mortality outcomes compare the AOP group and Age-and-Gender Matched group with the Matched group.

5 IMPACTS OF AOP

In this section, we show differences between actual outcomes for AOP victims and what we would have expected for all outcomes except mortality. We cannot use Later AOP to calculate this for mortality, as by construction this group must be alive for at least three years after the AOP group experienced an incident. Our mortality results therefore use the Matched group for drawing comparisons.

For other outcomes, Later AOP is used to create a counterfactual. Results using the Matched group are included in Appendix 4 as a robustness check. These sensitivity analyses give broadly similar results, although in some cases impacts appear before the identified AOP event, likely reflecting unobserved earlier harm.

In Figures 29 to 40 (except for mortality), we present these differences for four quarters before and eight quarters after the event. To interpret these charts, we are looking for a change in the trend before and after the incident. Mortality charts present differences from Q0 to Q7, and we interpret these charts by looking for estimates that are different from zero.

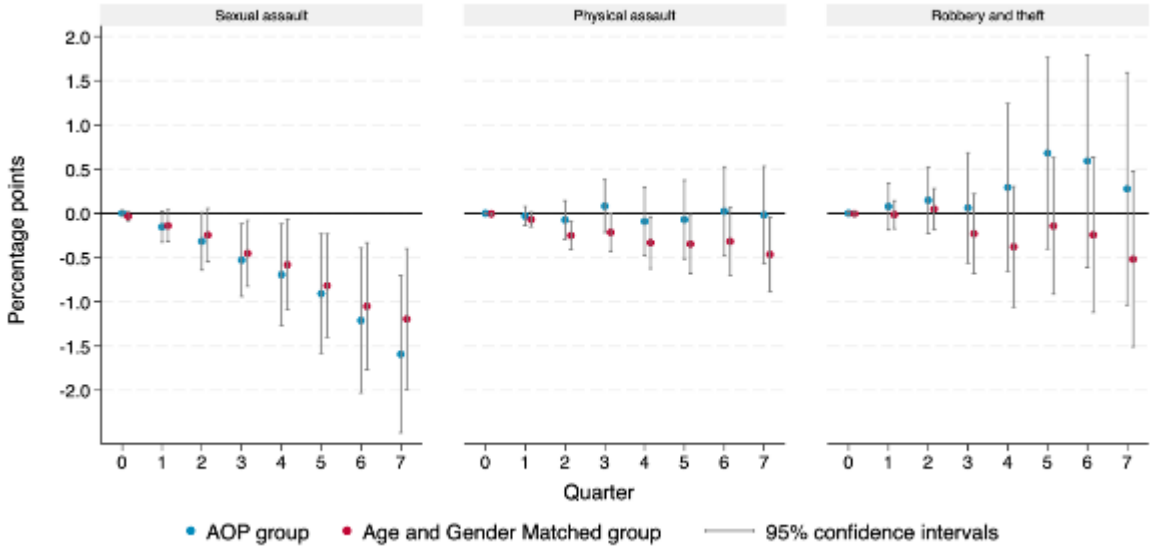
5.1 Health and wellbeing

Mortality

Figure 29 shows our mortality results. The Matched group is used to create a counterfactual since the "Later AOP group" cannot be used for this outcome.

For sexual assaults, both the AOP and the Age-and-Gender Matched group exhibit lower mortality rates. It is not clear why this is the case, but importantly, the AOP and Age-and-Gender Matched groups follow similar trends. For the two other incident types, the Age-and-Gender Matched group seems to have lower mortality rates compared to the AOP group, but the differences are not statistically significant. The three graphs suggest that AOP incidents do not have significant impacts on mortality rates in the two years after the incident.

Figure 29: Difference in probability of mortality compared to Matched group



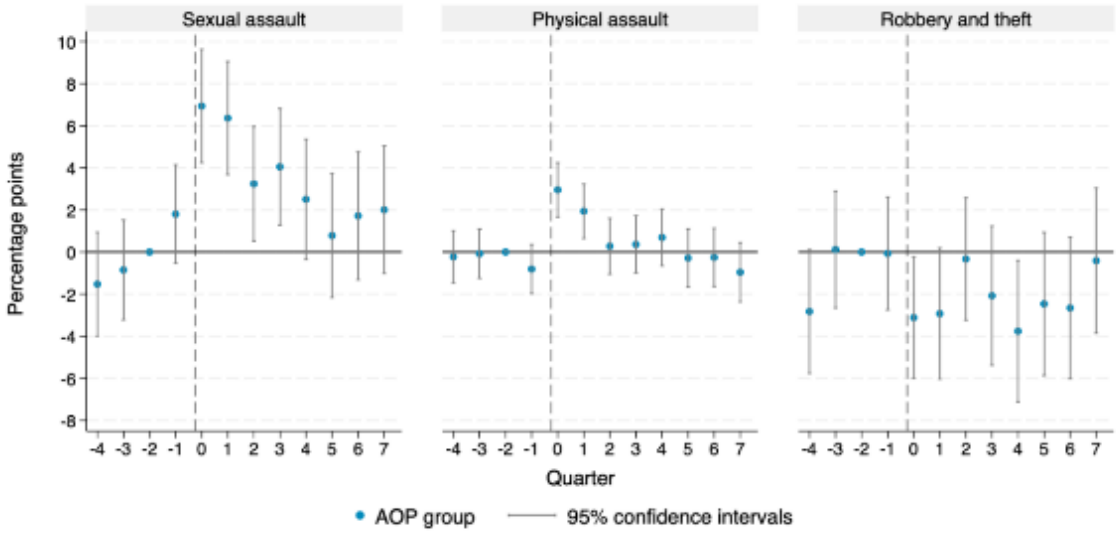
Mental health prescriptions

Figure 30 shows differences in the probability of receiving a mental health prescription for AOP victims compared with the counterfactual.

AOP victims of sexual and/or physical assault show a clear short-term increase in the likelihood of receiving mental health prescriptions. For victims of sexual assault, the probability rises by about 4–7 percentage points immediately after the incident. For physical assault, the increase is about 2–3 percentage points. These effects taper off within two quarters, after which prescription rates return close to pre-incident levels. We do not see a measurable impact for victims of robbery and theft.

These findings suggest that incidents of sexual and physical assault AOP are associated with a short-term increase in mental health treatment, but that this impact does not persist beyond the first two quarters after the incident.

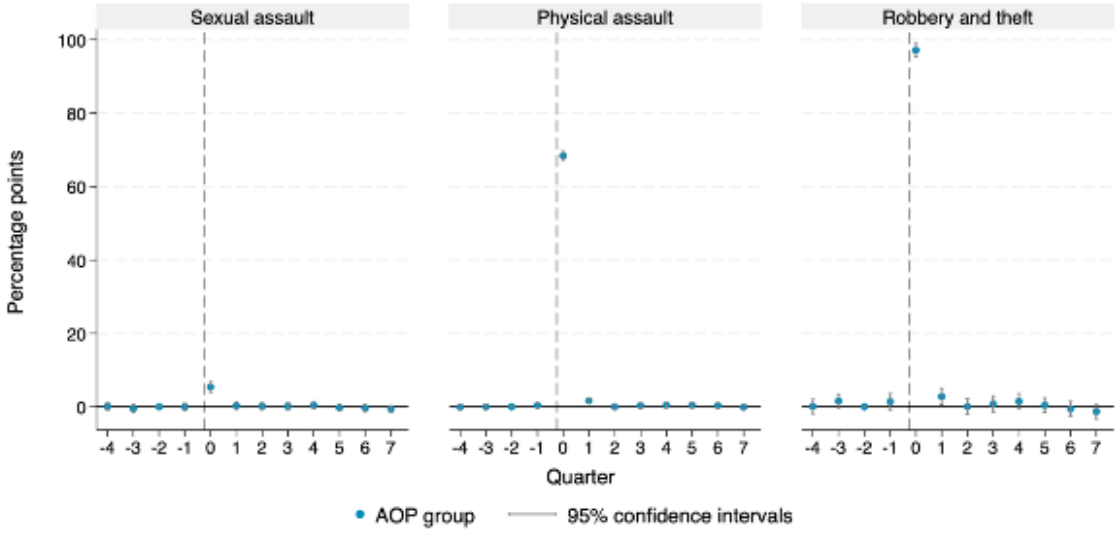
Figure 30: Difference in probability of receiving mental health prescriptions compared to Later AOP group



Victimisation

Figure 31 shows that AOP incidents are visible in the IDI mainly in the quarter when they occur. For all types of AOP, victims are more likely to appear in police records in that quarter, reflecting the incident itself. For robbery and theft, the increase is close to 100 percentage points because these cases are only identified through police data. Sexual and physical assaults can be detected in other datasets as well, so not all incidents appear in police records. We do not see evidence of sustained or repeated victimisation in the IDI beyond the reference quarter.

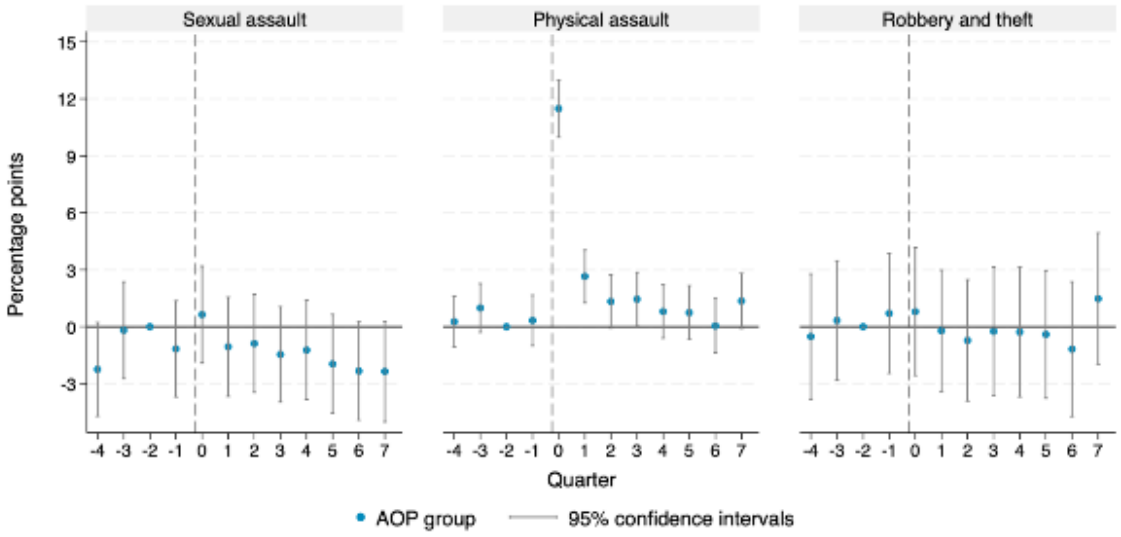
Figure 31: Difference in probability of victimisation compared to Later AOP group



Hospitalisation

Figure 32 shows that physical assault AOP leads to more hospital admissions. The likelihood of hospitalisation increases by about 11 percentage points in the quarter of the incident and remains about 2 percentage points higher in the following quarter. Robbery and theft do not show an increase in hospitalisation. Sexual assault also does not show a rise for inpatient admissions, which may reflect that many victims are treated in outpatient or emergency settings that are not included in this measure.

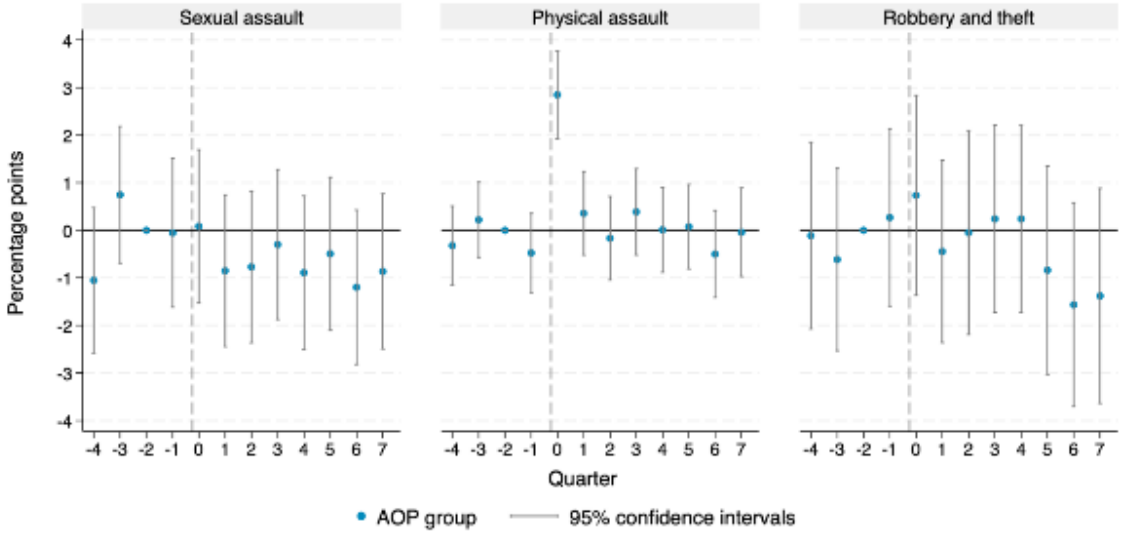
Figure 32: Difference in probability of hospitalisation compared to Later AOP group



Ambulatory sensitive care hospitalisation (ASH)

Figure 33 shows a short-term increase in ASH for victims of physical assault AOP. Their likelihood of having an ASH admission rises by nearly 3 percentage points in the quarter of the incident, but then quickly returns to pre-incident levels. Sexual assault, robbery, and theft are not associated with any change in ASH admissions.

Figure 33: Difference in probability of ASH compared to Later AOP group

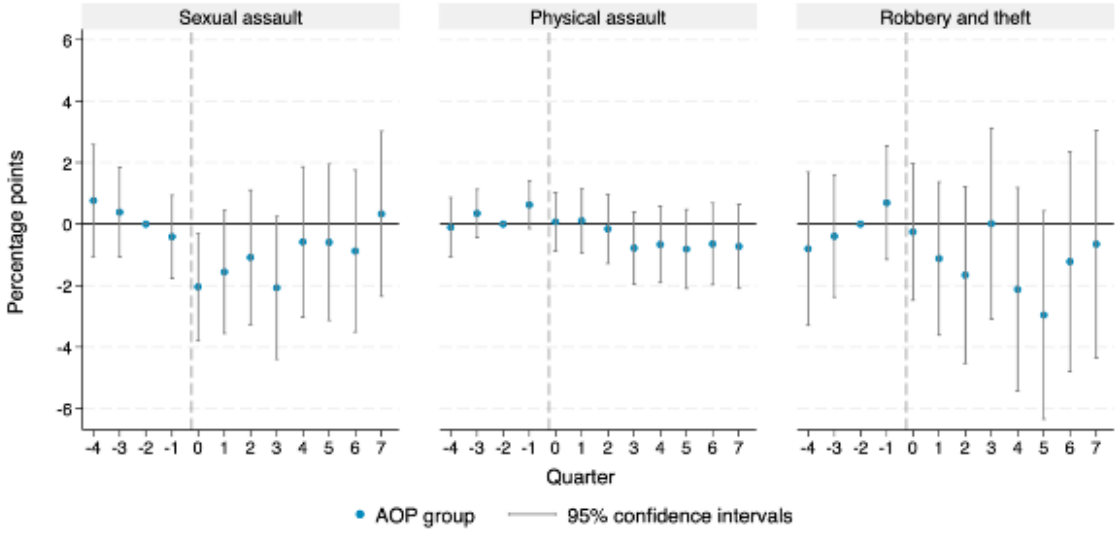


5.2 Economic

Employment

Figure 34 shows little evidence that AOP incidents affect employment overall. For sexual assault victims, there is a possible short-term drop in employment at the time of the incident, with their likelihood of being employed falling by up to 2 percentage points compared with the counterfactual. However, this effect does not persist, and the overall trend is flat. For other types of AOP, there is no measurable impact on employment.

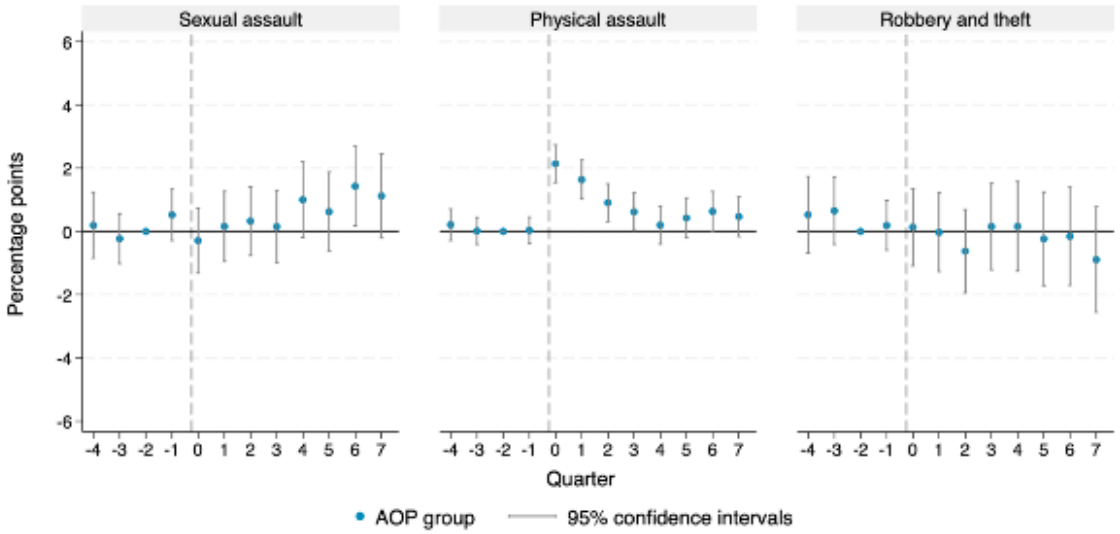
Figure 34: Difference in probability of employment compared to Later AOP group



Receipt of ACC

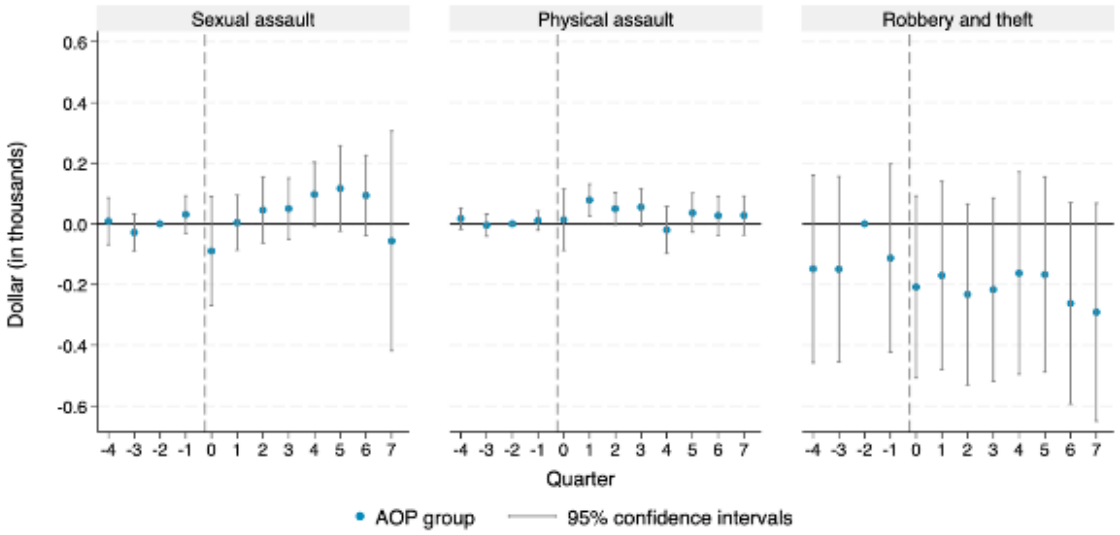
Figure 35 shows no difference in the likelihood of receiving ACC payments for victims of sexual assault or robbery and theft compared with the counterfactual. Victims of physical assault AOP, however, are about 2 percentage points more likely to receive ACC payments in the quarter of the incident. This difference declines over time and disappears by the fourth quarter.

Figure 35: Difference in probability of receiving ACC payments compared to Later AOP group



While physical assault AOP victims are more likely to receive ACC payments for up to nine months following the incident, Figure 36 shows that the actual amount of such payments is low.

Figure 36: Difference in ACC income compared to Later AOP group



Benefit receipt (excluding NZ Super)

Figure 37 shows no clear evidence that AOP incidents affect the likelihood of receiving non-NZ Super benefits. The conservative interpretation is that AOP victims follow the same trend as the comparison group.

There are some signs of a possible short-term effect for sexual assault victims: in the year after the incident, they may be around 3 percentage points more likely to receive benefits than the counterfactual. For both sexual assault and physical assault, benefit receipt then appears to return toward pre-incident levels. However, because the estimates overlap, these patterns should be interpreted with caution.

Figure 37: Difference in probability of receiving benefit payments (excluding NZ Super) compared to Later AOP group

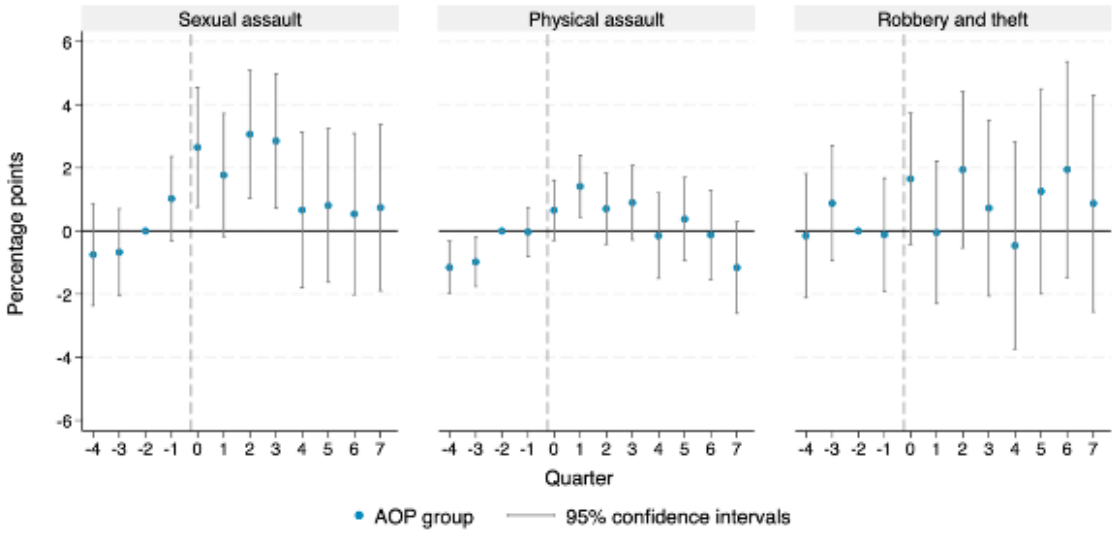
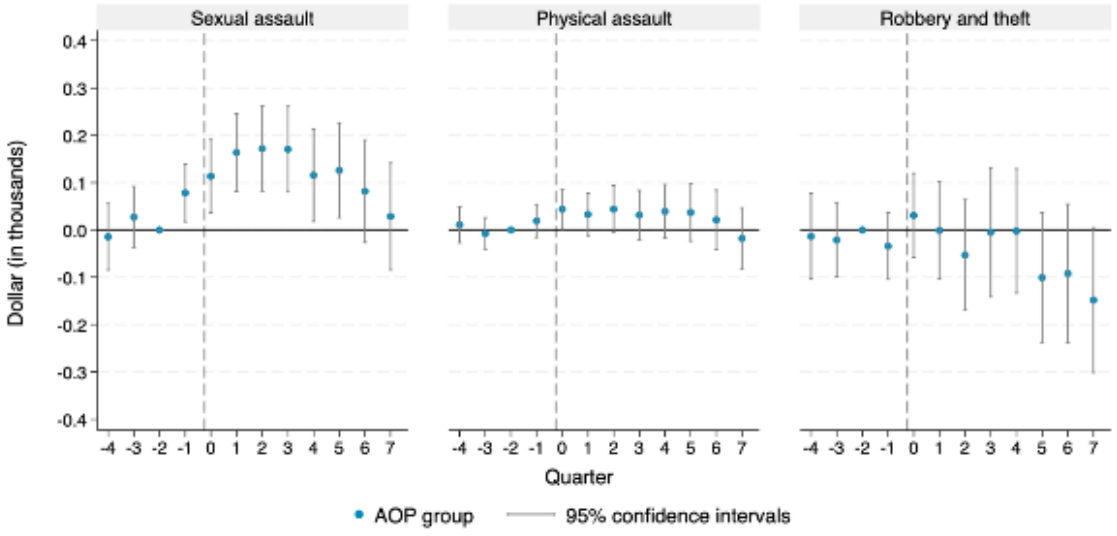


Figure 38 shows that victims of sexual assault AOP receive approximately $150/quarter more in benefit income than the "Later AOP group", for up to 18 months following the incident. However, benefit income is also higher in the quarter *before* the incident, which may suggest the parallel trends assumption does not hold (see Figure 28).

Figure 38: Difference in benefit income (excluding NZ Super) compared to Later AOP group

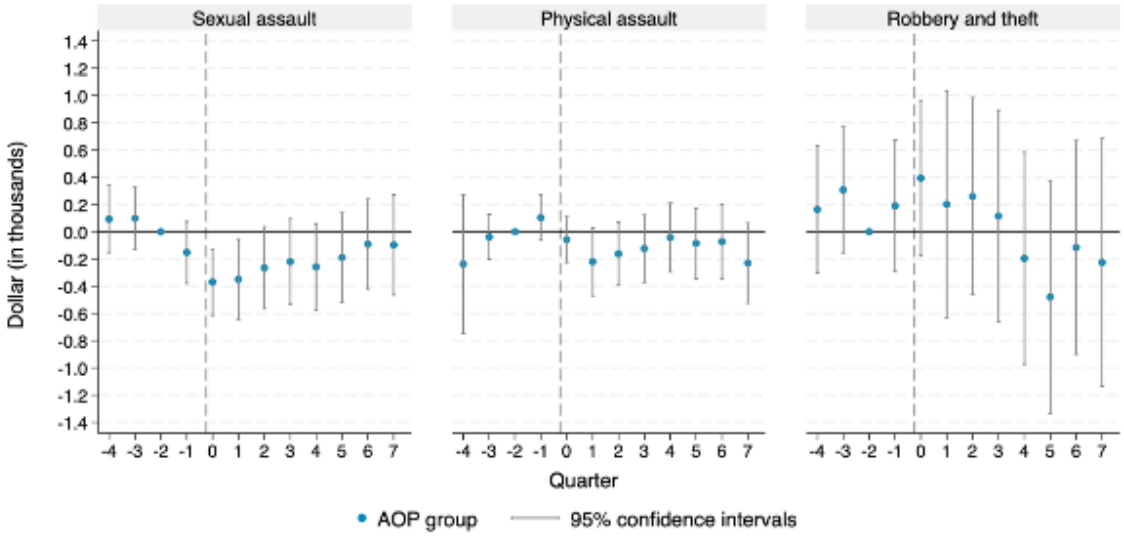


Earnings

Figure 39 shows no change in earnings for victims of robbery and theft or physical assault AOP compared with the "Later AOP group". Victims of sexual assault, however, experience a short-term drop in earnings

at the time of the incident. The reduction is around $400 per quarter on average, but there appears to be a downward trend before the incident – therefore a more cautious estimate is closer to $100 per quarter. This effect does not persist beyond the first two quarters.

Figure 39: Difference in earnings compared to Later AOP group



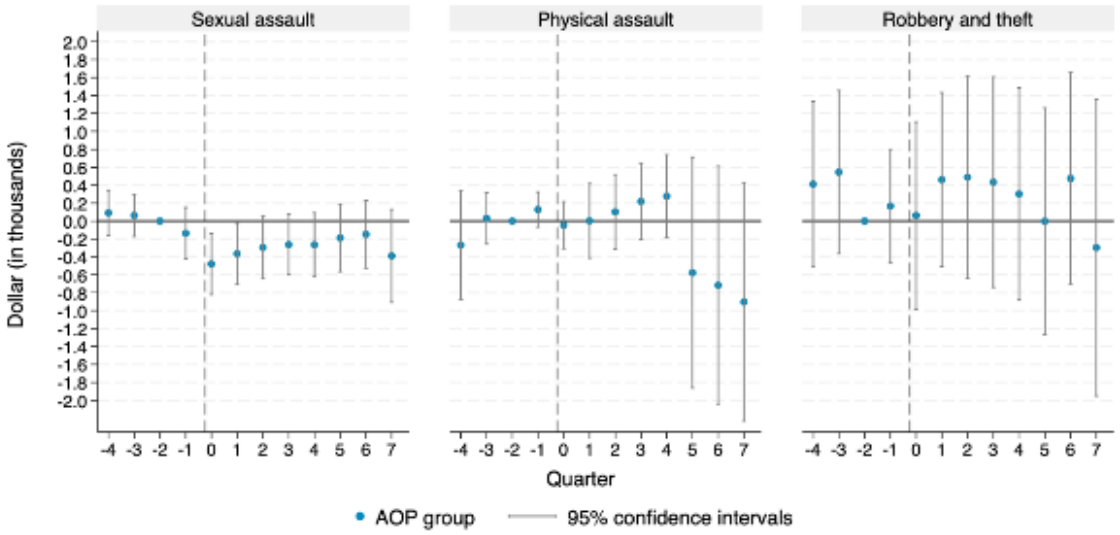
All income

Figure 40 shows total income patterns that are similar to earnings. Victims of robbery and theft or physical assault AOP show no change in income compared with the comparison group.

Victims of sexual assault AOP, however, experience a short-term drop in income at the time of the incident. The reduction is around $500 per quarter, but allowing for the pre-incident downward trend, a more cautious estimate is closer to $300 per quarter. Income levels remain somewhat lower for several quarters, but the estimates overlap with zero from the second quarter onwards, meaning the difference is not significant.

In summary, sexual assault AOP is linked to a short-term fall in income, while physical assault and robbery/theft show no measurable impact.

Figure 40: Difference in income compared to Later AOP group



6 DISCUSSION

The AOP prevalence rates we report here – 0.2% in the administrative data and 2%–4% in the NZCVS – are implausibly low. For example, initial estimates from the *Prevalence Survey Report* data suggest it is about 85 times higher (about 17%), see Meehan et al. (2026).

Yet the prevalence rates we report can still contribute to a fuller understanding of AOP in NZ. Below we describe the most important considerations in interpreting these rates.

6.1 Strengths and limitations of this study

This study has several strengths. It makes use of the IDI, which provides whole-population coverage of recorded cases, rather than relying on a sample. This allows us to examine small groups and a wide range of demographic factors, including age, gender, ethnicity, deprivation, home ownership, disability, and Rainbow identity. The study also looks beyond prevalence, estimating impacts of AOP across multiple domains – health, income, employment, and social service use – using consistent longitudinal methods. By including multiple comparator groups, we can test the robustness of findings and reduce confounding. These are important advances for understanding the severe cases of harm that come to the attention of public services.

There are also methodological limitations. The IDI captures only a small subset of all harm, mainly severe cases. Non-physical harm and neglect are poorly captured. Differences between groups may partly reflect service use and reporting patterns rather than true differences in prevalence. The Later AOP comparator group cannot be assumed to be perfectly equivalent to the AOP group. These limitations mean the results should be interpreted as patterns in the administrative data, not as population prevalence.

6.2 Why does the IDI data underestimate AOP prevalence?

The administrative data are likely to only capture the more extreme cases of abuse (e.g. physical abuse that results in an injury that requires an ACC claim and/or hospital visit, or results in police involvement). It also does not capture non-physical forms of abuse well, such as psychological and financial abuse. Neglect is particularly difficult to capture in the administrative data. Extreme cases may lead to a hospital visit or police notification, but there are no specific coding categories for neglect in hospital or police records, so many cases remain invisible. In principle, family members, carers, or staff in institutions have a duty of care to protect vulnerable adults. Failure to meet this duty can result in prosecution, although such cases

appear to be relatively rare. Overall, most neglect is not visible in the administrative data, and where it does appear (e.g. in interRAI assessments) it tends to reflect only more severe situations.

Survey findings reinforce why so much AOP is not visible in the administrative data. According to the *Prevalence Survey Report*, just over half (56.2%) of older people experiencing AOP report seeking help at all, and most of those turn to informal channels such as family/whānau (38.6%) or friends (32%) (Meehan et al., 2026). Only a minority approach formal services, meaning many cases never appear in the systems that generate administrative records.

Non-physical forms of abuse are much harder to identify in the administrative data because they do not usually trigger contact with services that create records. Better capture would require more systematic screening and recording of psychological, financial, and neglect-related harms within service settings. For example, expanding interRAI assessments, primary health care records, or social service intake processes to consistently include questions about these forms of harm could provide more visibility. Over time, such approaches would help administrative data to reflect a wider spectrum of AOP, not just the most severe physical cases.

6.3 What can we learn from prevalence estimates from the IDI?

As discussed in Section 3.3, survey and administrative data capture different aspects of AOP. The NZCVS records self-reported experiences, while police data reflect only reported and recorded incidents. These differences highlight the importance of interpreting IDI-based prevalence estimates cautiously and in conjunction with survey data.

IDI data cannot provide a definitive measure of AOP prevalence in NZ; for that, bespoke primary data collection is required. We have undertaken such collection in related work in the *Prevalence Survey Report*, the findings of which are included in a separate report (Meehan et al., 2026). However, primary data collection is expensive and resource intensive, meaning it may not be feasible to regularly collect such data. It is important, therefore, to make use of datasets held in the IDI despite their limitations.

To get the most value from prevalence as measured in the IDI, calibration with prevalence as measured by primary data (when these are available) will enable greater confidence in interpreting the IDI prevalence. An example of such calibration in this report appears in Section 3.1 in the discussion of age.

One useful feature of the IDI data is that they are collected continuously, which in principle allows us to observe changes over time. However, given the very low prevalence detected in the administrative data and the differences compared to survey-based prevalence, these trends should be interpreted cautiously.

Apparent increases or decreases may reflect changes in policies or recording practices as much as changes in underlying harm. The IDI highlights clear inequities for Māori and people living in high-deprivation areas, but it likely underestimates harm for some other groups, including Pacific and Asian older people. This reflects differences in how groups may interact with public services following harm, with some groups less likely to report incidents to agencies such as police, health, or ACC, and therefore less likely to appear in administrative records. Even so, when interpreted alongside survey data and other evidence, the IDI can provide useful signals about severe cases and potential inequities that warrant further investigation.

6.4 What does the IDI tell us about the impact of AOP?

Despite the limitations of the IDI for detecting AOP, we can see some impacts clearly, especially for the use of health services. There is a clear increase in mental health prescriptions for victims of sexual and physical assault AOP incidents for six months following the incident, as well as an increase in hospitalisations and ASH cases for physical assault AOP victims over the same time period. Consistent with this, physical assault AOP victims are more likely to have ACC income in the nine months following the incident.

7 IMPLICATIONS AND CONCLUSION

Findings from the IDI show that only a small share of AOP is captured in the administrative data. This is because cases must reach police, hospitals, or ACC to be recorded. As a result, the IDI cannot provide a reliable estimate of overall prevalence, but it does highlight the most severe cases and shows important differences across groups. Māori, people in high-deprivation areas, and those without secure housing are more likely to appear in these data. These inequities reflect wider social and health disparities.

This evidence has several possible implications. Administrative data cannot replace prevalence surveys, which remain the most reliable tool for measuring and monitoring AOP at a national level. IDI data can complement these surveys by showing the characteristics and outcomes of more severe harm. Over time, if AOP screening and reporting were systematically embedded into service settings (e.g. through police, ACC, hospital, or interRAI assessments), these could become valuable administrative data sources for ongoing monitoring.

At present, administrative data provide little information on psychological abuse and neglect that does not meet the threshold of an offence. These forms of harm remain largely invisible in existing datasets, despite their significance. They could be better captured through systematic approaches in service settings, such as interRAI assessments, primary health care, or social service intake processes. Developing consistent ways to record these less visible forms of harm would complement survey data and help build a fuller picture of AOP.

For policy, these findings suggest opportunities to strengthen detection and response. Embedding routine screening and monitoring questions about AOP in health, justice, and social service settings would make more cases visible in administrative records. Improving coding practices, particularly for non-physical forms of harm, would also help. The consistent inequities seen for Māori and high-deprivation communities reinforce the need for prevention and support initiatives that are equity-focused and culturally grounded. Recognising the downstream costs of severe harm, investment in prevention is not only a matter of safety and dignity, but also of reducing demand on health, justice, and welfare systems (e.g. see Benson et al., 2026 for an analysis of AOP's cost).

For future research, regular national prevalence surveys remain essential to monitor the full extent of AOP, as administrative data alone cannot provide this. Linking across administrative datasets could also improve our understanding of the long-term impacts of severe harm. Finally, a major gap remains in understanding AOP in residential care facilities, where no reliable prevalence estimates are currently available.

In summary, while administrative data provide only a partial view, they confirm that severe harm exists and has significant impacts. Strengthening survey measurement, embedding AOP screening into existing services, and improving the quality of administrative records will together provide a stronger foundation for reducing harm to older people.

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Appendix 1: Technical detail, propensity score matching

The Matched group was identified using propensity score matching. Propensity scores were generated using Probit models (one for each incident type), specified as:

$$Prob(V_{i,j,y} = 1 | X_{i,y}) = \Phi(\alpha X_{i,y})$$

Where $V_{i,j,y}$ is a binary variable which equals 1 if person i is a victim of incident type j in year y, and 0 if the person is in the candidate pool; $X_{i,y}$ is a set of control variables used to predict the probability of a person being an AOP victim; Φ is the cumulative distribution function of the standard normal distribution; and α is the coefficient describing the relationship between the control variables $X_{i,y}$ and the probability of being an AOP victim.

The control variables include four sets of variables: year and territorial authority dummy variables, demographic variables (gender, prioritised ethnicity, region, age in years (integer), age squared, disability status, age of arrival group, home ownership interacted with deprivation index decile of residence, qualifications), different types of income in the previous year, and welfare outcomes including hospitalisation, victimisation, and mental health prescription in the previous year. The control variables are defined and described in Appendix Table 1.

Appendix Table 1: Control variables included in regressions to generate propensity scores

Variable	Data source	Category
Year	Stats NZ estimated resident population	Dummy variables for years 2015–2022. The year refers to the year ended 30 June (e.g. 2022 refers to the year that ends 30 June 2022)
Gender	Personal detail	Male and female
Prioritised ethnicity	Personal detail	Māori, Pacific peoples, Asian, MELAA, European
Deprivation index decile interacted with home ownership	Deprivation index decile: IDI personal details table; Censuses Home ownership: For year 2015–2020, we use the 2018 census; for year 2021–2022, we use the 2023 census. Home owners are the ones who report that their residence is	All addresses in New Zealand map onto meshblocks. These meshblocks are assigned values on the NZDep Index each census and grouped into deciles of deprivation. We use the NZDep2018 Index 30 categories from 10 deciles interacting with three home

Variable	Data source	Category
	held in a family trust or is owned or partly owned by them	ownership status categories (home owners, non-homeowners, home ownership info missing)
Territorial authorities	Address notification file, Stats NZ metadata to map meshblock to territorial authorities	
Qualification	We use the Administrative Population Census (APC) information first; if qualification in APC is missing, we use 2018 census information	Four groups: Qualification missing, No qualification, Level 1–4 certificate, Level 5–6, bachelor and above
Age	Personal detail (birth year and month)	Age in integers for age 55 and above
Disability status	2018 and 2023 censuses	Disabled or not
Age of arrival	Administrative Population Census	Four groups: NZ born, arrived before 18, arrived between 18 and 36, arrived after 36
Receiving non-zero amount of specific types of income last year: earnings, ACC, NZ super or Veteran's pension, Jobseeker support, Supported living payment, Other benefits	Administrative Population Census	Receive non-zero payments or not last year
Amount of specific types of income last year: earnings, ACC, NZ super or Veteran's pension, Jobseeker support, Supported living payment, Other benefits	Administrative Population Census	Numeric values in dollars
Mental health prescription	Programme for the integration of mental health data (PRIMHD), Hospital discharge events, Socrates, Pharmaceutical collection	Have mental health prescription or not last year
Victimisation	Police victimisations data	Reported as a victim of any offence last year
Hospitalisation	Public and private hospital discharge events dataset	Had any inpatient hospital visits last year or not

We apply the estimated coefficients, α to all AOP victims and older people in candidate pools to obtain the predicted probability of being an AOP victim, which is the propensity score used to match.

Appendix 2: Technical detail, group comparisons

To examine how closely our AOP group resembles the Stranger Violence and Age-and-Gender Matched group on observable characteristics, we estimate regression equations for each type of incident. The regression specification is:

$$X_{i,y} = \alpha + \sum_{j=2}^{5} \beta_j D_{i,j,y} + \delta_y + \epsilon_{i,y}$$

Where $X_{i,y}$ are characteristics variables; $D_{i,j,y}$ are indicators such that $D_{i,j,y}$=1 if individual i is in group j at time y, and 0 otherwise. We assign values of j to the five groups: Age-and-Gender Matched (j=1), AOP (j=2), Stranger Violence (j=3), Later AOP (j=4), Matched (j=5). δ_y are year dummy variables. We estimate heteroskedasticity-robust standard errors. We report β_2 and β_3 in Section 4.2, which capture the differences between AOP/Stranger Violence victims and Age-and-Gender Matched group.

Appendix 3: Technical detail, impact analysis

The regression equations used to identify the impact of AOP, as described in Section 4.4, are specified as follows:

$$Y_{i,q} = \alpha + \sum_{j=2}^{5} \theta_j D_{i,j,q} + \sum_{q=0}^{7} \alpha_q D_q + \sum_{q=1}^{7} \sum_{j=2}^{5} \beta_{j,q} D_{i,j,q} \cdot D_q + \gamma_q X_i + \sum_{q=1}^{7} \gamma_q X_i \cdot D_q + \delta_y + \delta_{TA} + \epsilon_{i,q}$$

for mortality, and

$$Y_{i,q} = \alpha + \sum_{j=2}^{5} \theta_j D_{i,j,q} + \sum_{q=-4}^{7} \alpha_q D_q + \sum_{q=-4}^{7} \sum_{j=2}^{5} \beta_{j,q} D_{i,j,q} \cdot D_q + \gamma_q X_i + \sum_{q=-4}^{7} \gamma_q X_i \cdot D_q + \delta_y + \delta_{TA} + \epsilon_{i,q}$$

for all other outcomes.

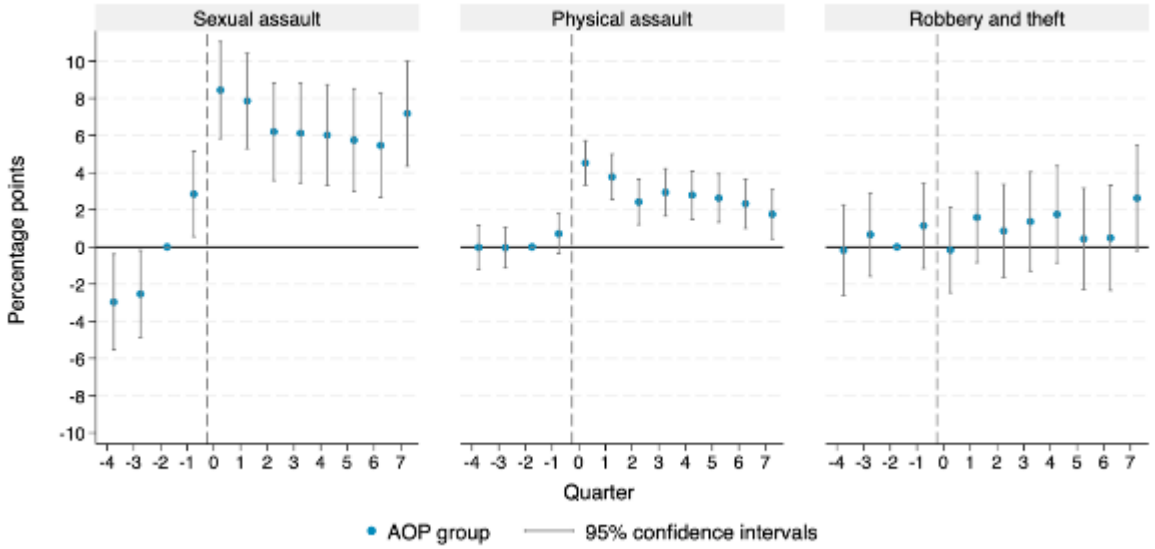
$Y_{i,q}$ is the outcome for individual i in quarter q; for binary variables this is equal to 1 if the outcome has occurred and 0 otherwise. $D_{i,j,q}$ are indicators such that $D_{i,j,q} = 1$ if individual i is in group j at quarter q and 0 otherwise. We assign values of j to the five groups as follows: Age-and-Gender Matched (j=1), AOP (j=2), Stranger Violence (j=3), Later AOP (j=4), Matched (j=5). D_q are quarter dummy variables. X_i are characteristics of individual i fixed to their values in Q0, including sex, ethnicity (prioritised), home ownership interacted with deprivation index decile, qualification level, age, and age square. δ_y are year dummy variables. δ_{TA} are territorial authorities dummy variables. We report two-way cluster-robust standard errors, clustered by individual and individual-calendar quarter. We report β in Section 5, which capture the differences between the AOP group (and, in the case of mortality, the Age-and-Gender Matched group) and the relevant comparison group.

Appendix 4: Sensitivity analyses

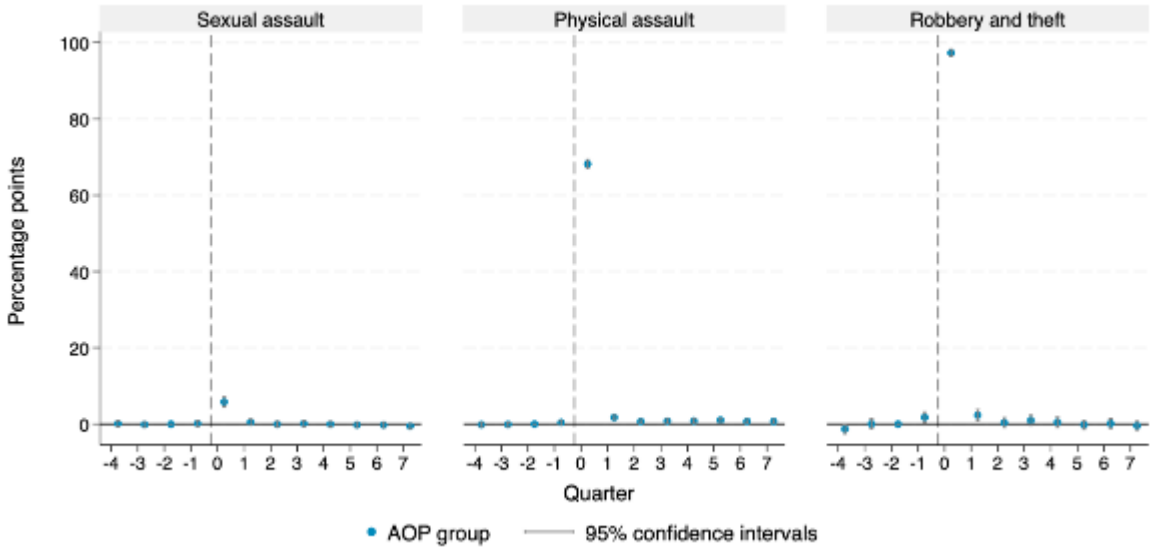
This section shows results when different analytical choices are made.

Using the Matched group for comparison

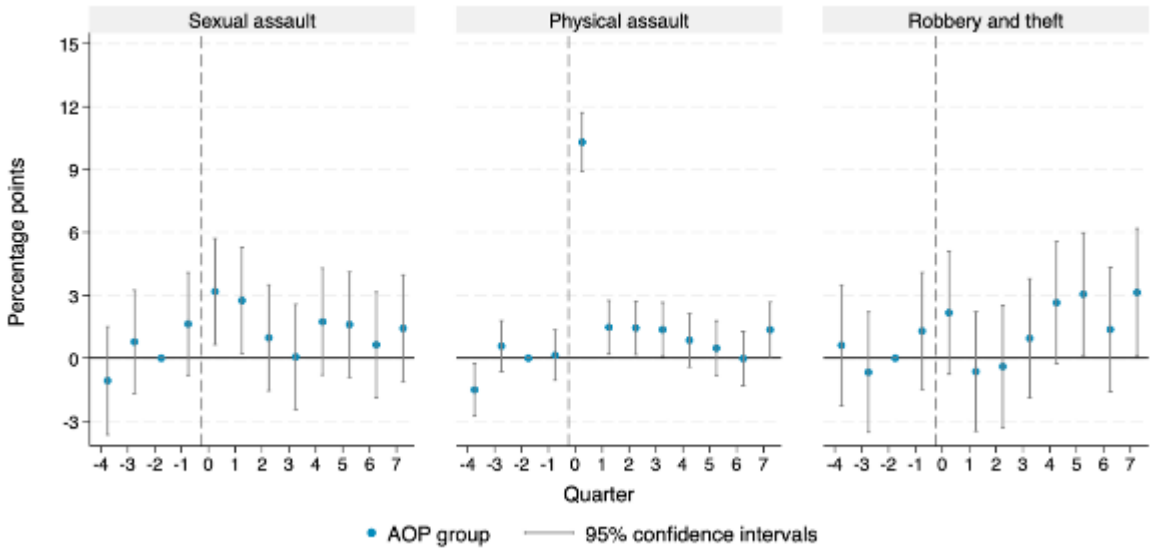
Appendix Figure 1: Difference in probability of mental health prescription



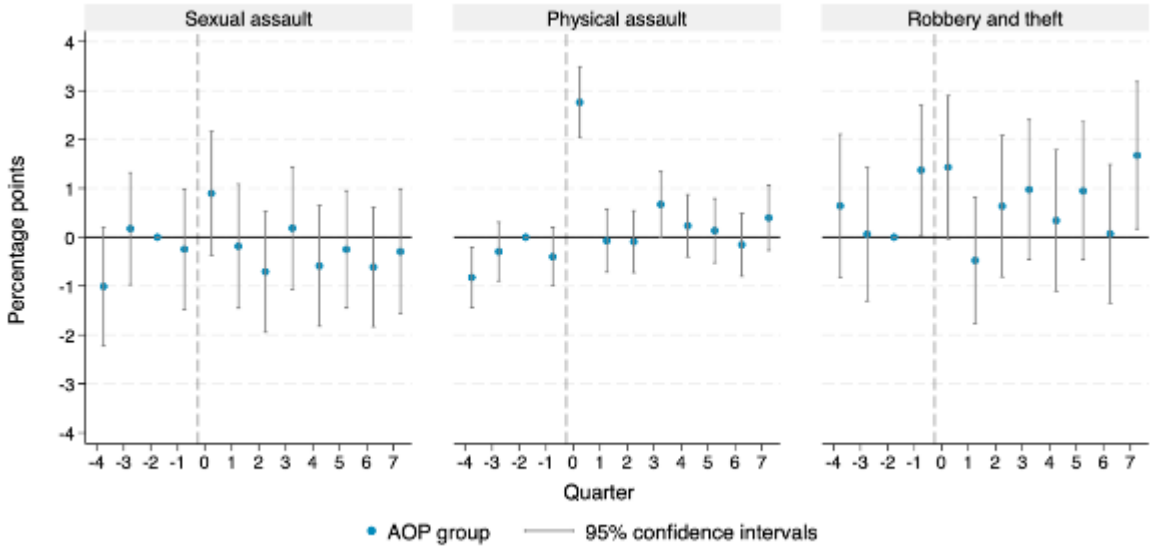
Appendix Figure 2: Difference in probability of victimisation



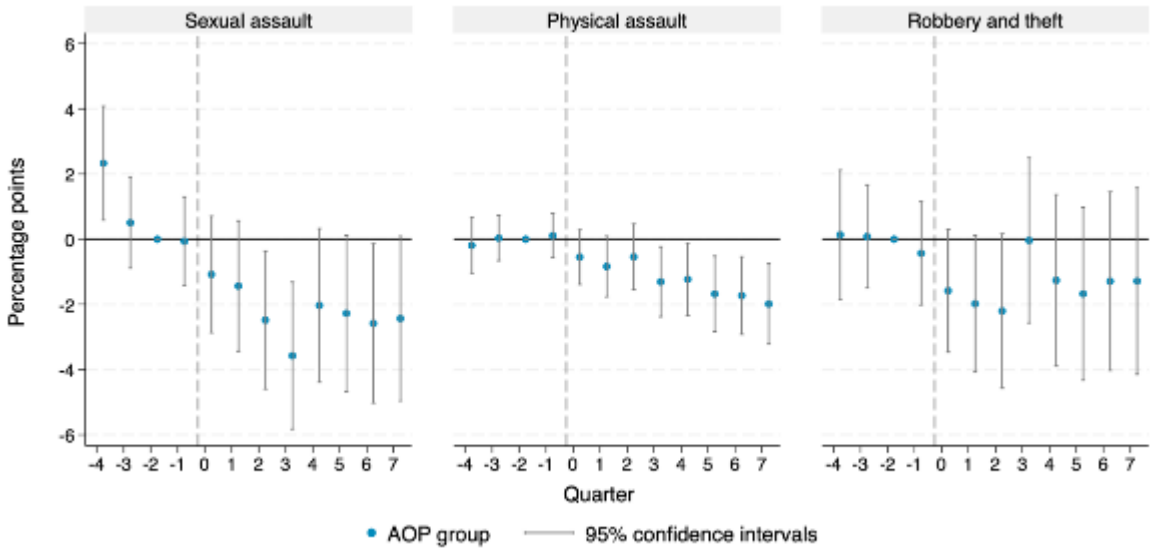
Appendix Figure 3: Difference in probability of hospitalisation



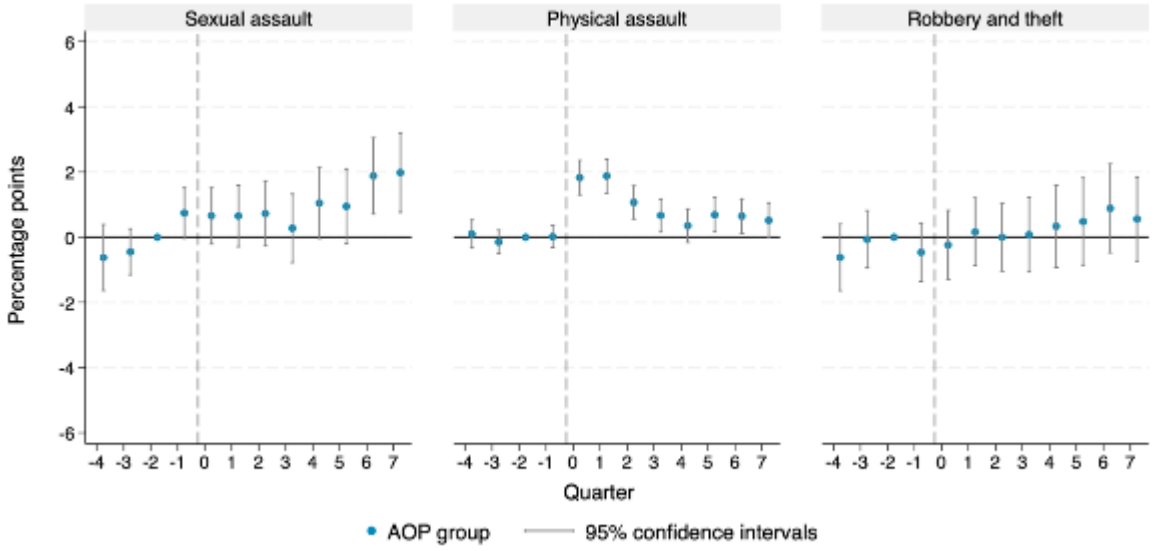
Appendix Figure 4: Difference in probability of Ambulatory Sensitive Hospitalisations (ASH)



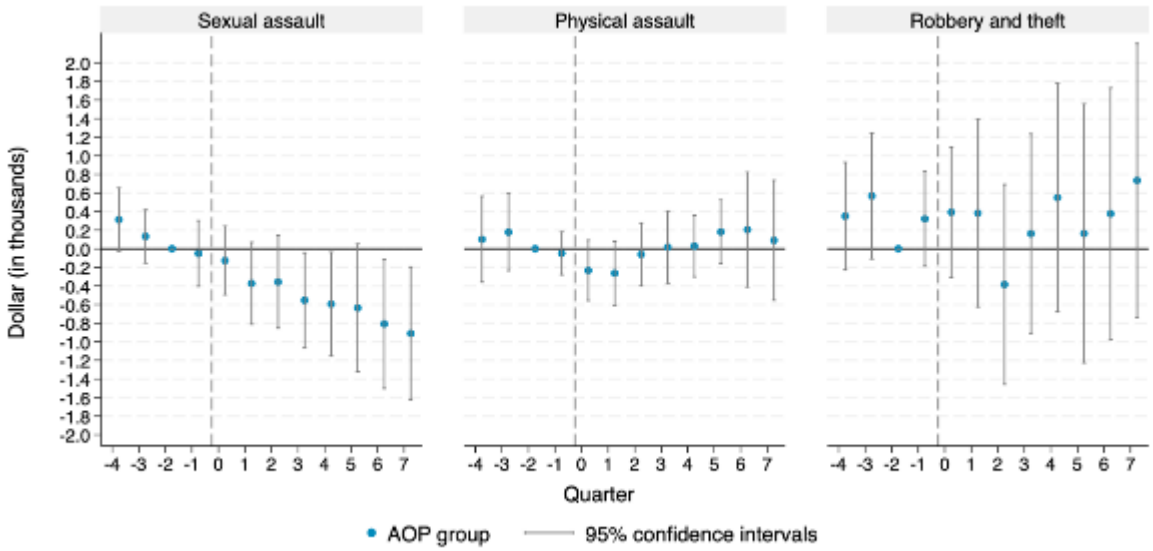
Appendix Figure 5: Difference in probability of employment



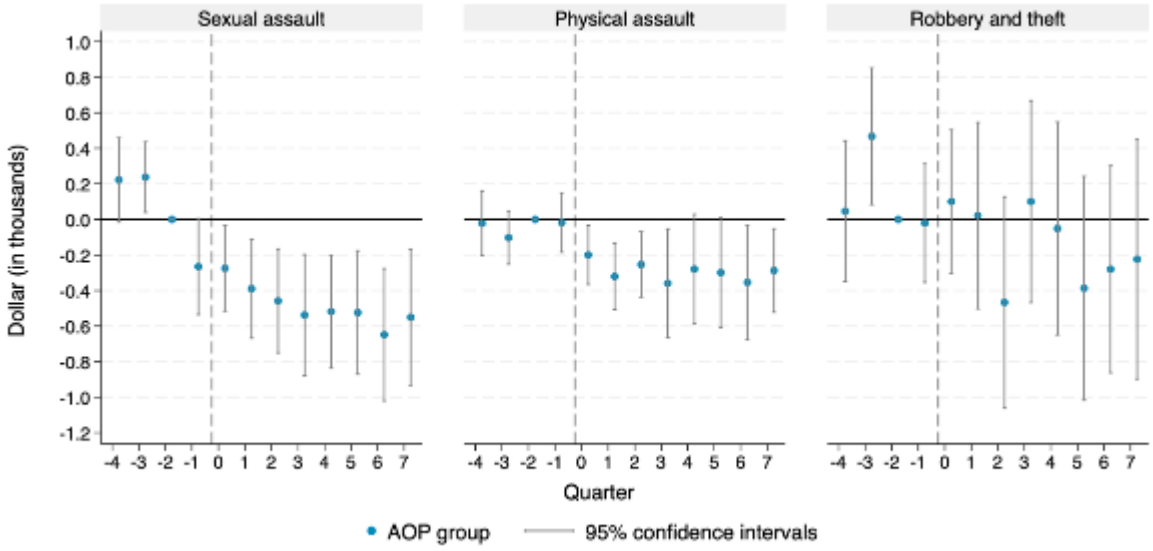
Appendix Figure 6: Difference in probability of ACC payments



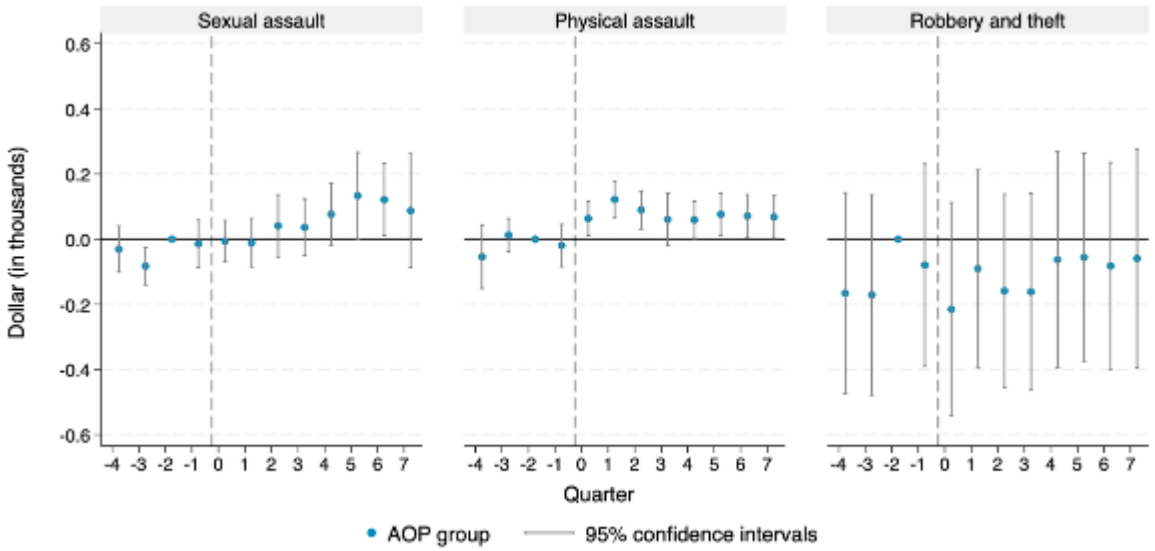
Appendix Figure 7: Difference in income



Appendix Figure 8: Difference in earnings



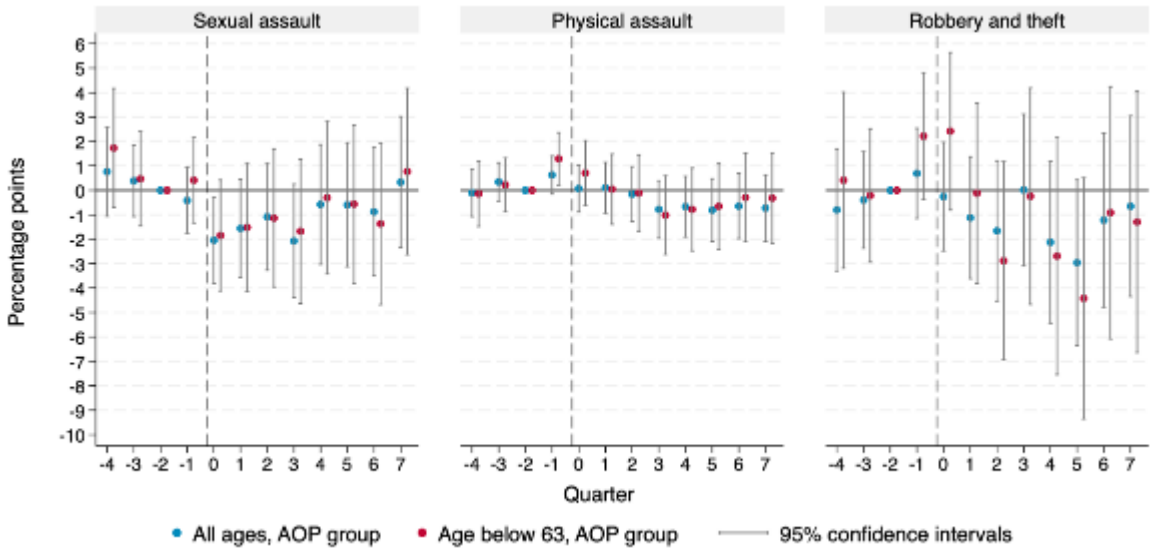
Appendix Figure 9: Difference in ACC payments



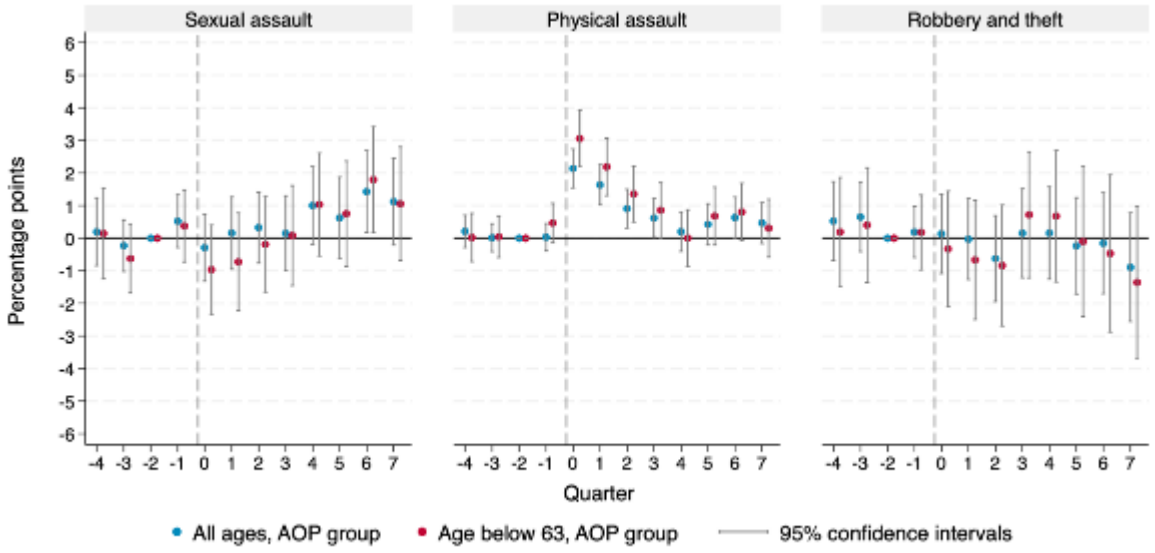
Limiting the sample

If we limit the sample to those aged younger than 63 at the time of the incident, no-one should have been receiving NZ Super in their own right within the study period.[15] Below, we show the income-related outcomes when this restriction is applied.

Appendix Figure 10: Difference in probability of employment

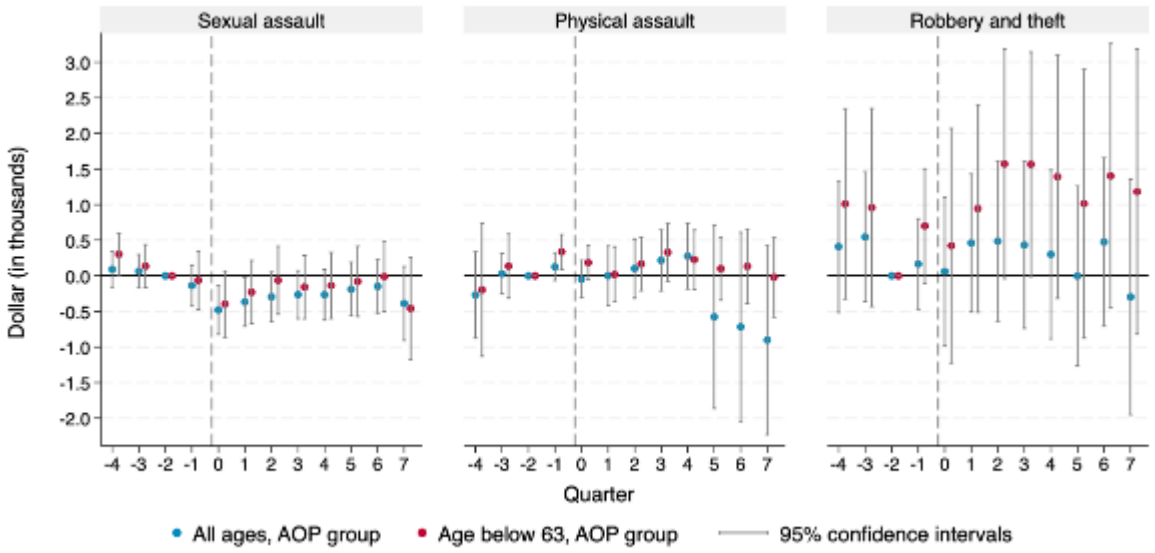


Appendix Figure 11: Difference in probability of receiving ACC payment

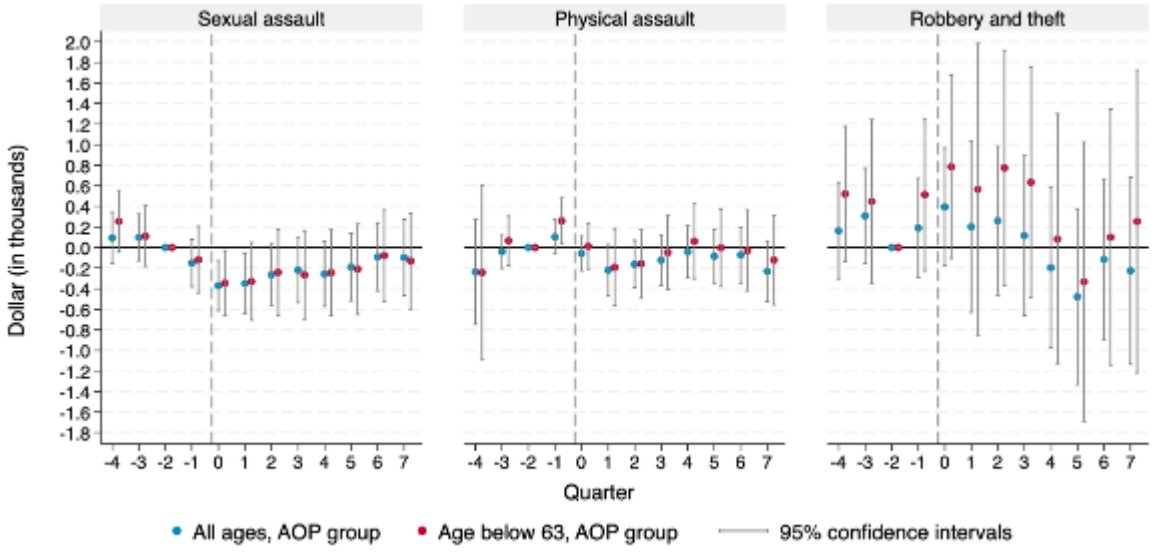


[15] Until July 2020, some partners under 65 could receive NZ Super through their partner's entitlement, but this provision has since been removed.

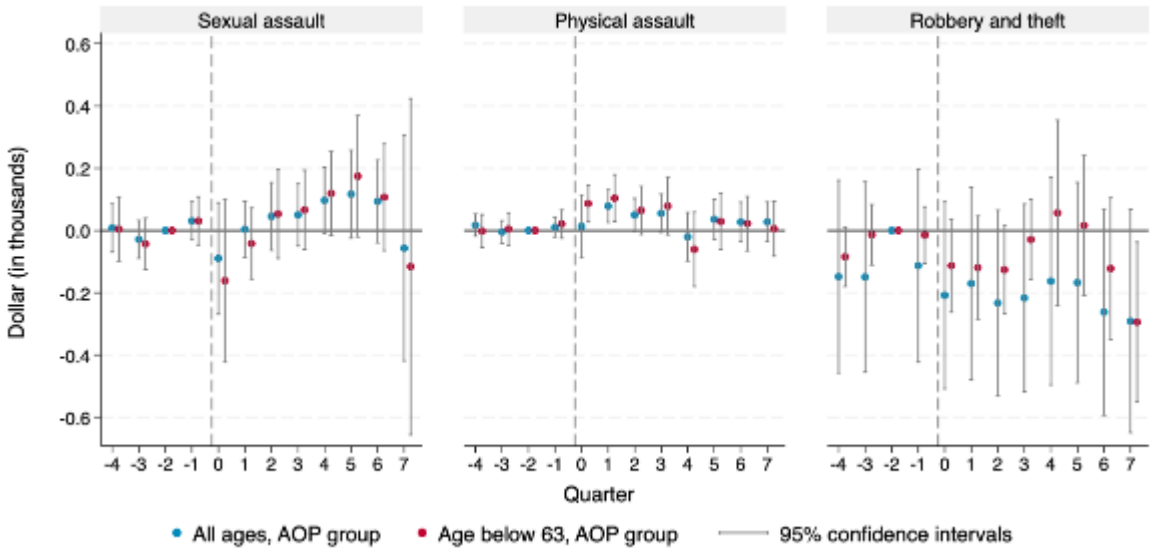
Appendix Figure 12: Difference in total income



Appendix Figure 13: Difference in earnings



Appendix Figure 14: Difference in ACC payment





NEW ZEALAND POLICY RESEARCH INSTITUTE

TE KĀHUI RANGAHAU MANA TAURITE

Auckland University of Technology, Auckland, New Zealand

policy.research@aut.ac.nz | www.nzpri.aut.ac.nz

AUT UNIVERSITY NEW ZEALAND