The consequences of victimisation: Evidence from linked survey and administrative data

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Acknowledgments and disclaimer

▶ Disclaimer: Access to the data used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers. These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) which is carefully managed by Stats NZ. For more information about the IDI please visit https://www.stats.govt.nz/integrated-data/. 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.

Motivation

- ▶ many direct and indirect costs of crime
  - ▶ well-documented: law enforcement, criminal justice spending
  - ▶ direct losses for victims such as property losses
- ▶ little evidence on consequences for victims: wellbeing, health, income?
- ▶ we use data from the New Zealand Crime and Victimisation Survey (NZCVS)
  - ▶ repeated cross-sectional survey with information on experiences of crime
  - ▶ first 4 cycles interviewed almost 30,000 adults between 2018 and 2021
  - ▶ includes victimisation that were not reported to the police
- ▶ high rates of crime victimisation
  - ▶ 31 % were victimised at least once in past 12 months
  - ▶ 7% victims of interpersonal violence
    (sexual assault; other assault; robbery; harassment and threatening behaviour; and household and personal property damage where the offender is known to the victim)
  - ▶ 9.8% victims of an incident that was perceived as serious
    (8 or higher on a scale from 0 to 10)

Data and Method

- NZCVS: only a third of incidents is reported to police
  - highest share for vehicle offences, lowest for fraud and cybercrime
  - more serious incidents tend to be reported more often
  - when asked for reasons: "too trivial", "police couldn't have done anything", "not enough evidence", "private/family matter" …
- compare outcomes of victims and non-victims in linked administrative data (IDI)
  - +/- 4 quarters around victimisation
  - income tax data to measure employment and earnings
  - injury claims from the Accident Compensation Corporation (ACC)
  - health care utilisation: hospitalisation, outpatient care, prescribed drugs, mental health services
- substantial difference even before victimisation
- what is the *causal* effect of victimisation?
  - compare *changes* over time using a difference-in-differences approach
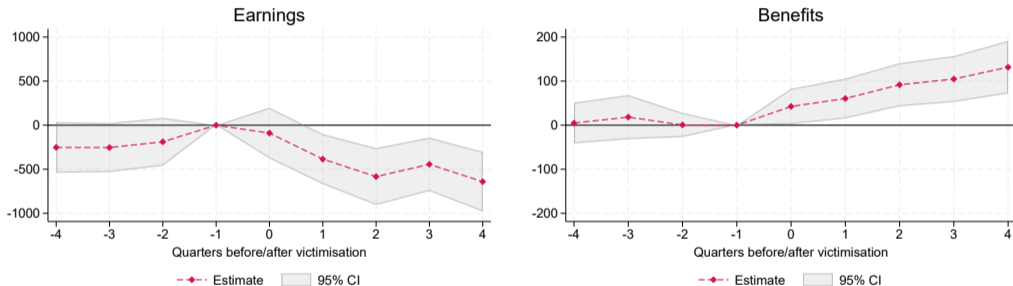
Labour market effects

Figure: Dynamic effect - any victimisation
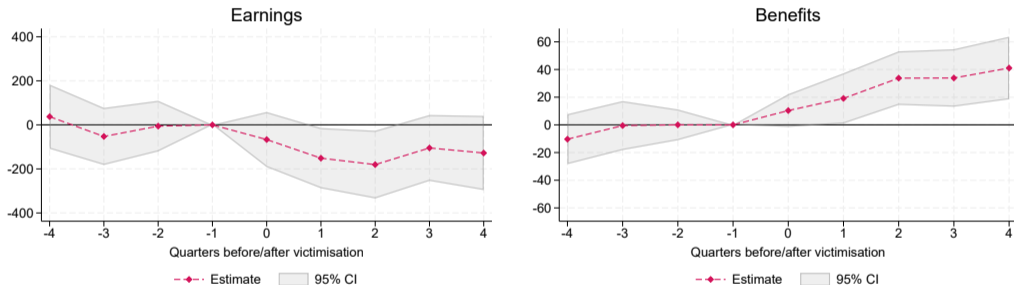
▶ decrease in earnings (average -$126, -1.4%) and increase in benefit receipt (+$28, +6%)

Labour market effects (2)

Figure: Dynamic effect - interpersonal violence

- ▶ stronger effects for interpersonal violence (earnings -$429, benefits +$86)
- ▶ and victims of serious offences

Health effects

Figure: Dynamic health effects - serious offence
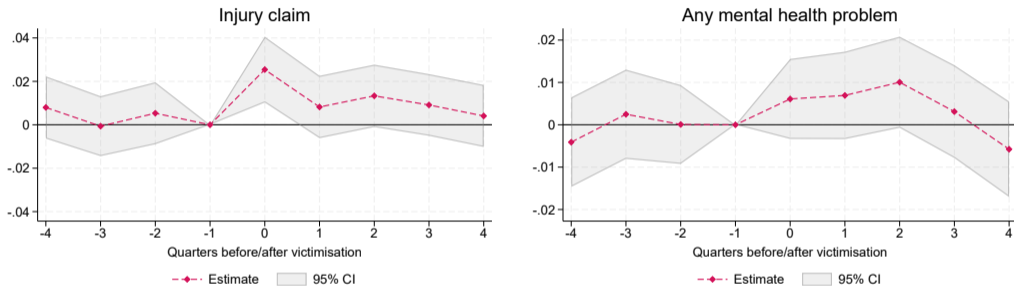
- ▶ increases in injury claims
- ▶ some effects on hospitalisations and ED visits
- ▶ effects on physical health tend to be short lived
- ▶ no statistically significant effect on mental health care utilisation

Conclusion

- becoming a victim has significant and persistent effects on labour market outcomes
  - earnings decrease and benefit payments increase
  - results robust to changes in weighting and estimator
  - effects for all considered subgroups (gender, ethnicity, age)
  - longer-term effects (3 years): effects on benefit receipt are persistent
- shorter-term effects on physical health
- no significant effects on mental health
- still work to do on health outcomes, offence types and victim-offender relationship

Thank you!

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Victimisation and reporting behaviour

Type of incident	Reported to police (%)	N of incidents
All incidents	32.3	13476
Crime categories		
Interpersonal violence	32.2	2871
Burglary	38.8	3900
Vehicle offences	50.3	1764
Fraud and cybercrime	9.2	2340
Perceived seriousness of incident		
Low	15.9	4425
Medium	34.0	4824
High	48.3	4146
Gender of victim		
Male	31.8	5466
Female	32.7	8007

Notes: Unweighted counts based on NZCVS cycles 1-4.

Outcomes before victimisation (5 quarters before interview)

	Victims	Non-victims	Difference	p-value
Labour market outcomes				
Earnings (NZ$)	9949.1	9114.0	835.1	0.001
Employed (%)	60.0	54.0	5.9	0.000
Benefits (NZ$)	429.3	250.0	179.3	0.000
Health (%)				
Injury claim	10.2	8.1	2.2	0.000
Hospitalisation	4.5	4.6	-0.0	0.940
Outpatient visit	15.5	14.7	0.8	0.247
Any mental health problem	13.5	11.5	2.0	0.001
Selected MH problems[a] (%)				
Emotional problems	6.3	4.7	1.6	0.000
Depression	2.8	3.0	-0.2	0.526
Sleep problems	2.5	2.6	-0.1	0.836
Anxiety	1.4	1.0	0.3	0.052
Substance	0.9	0.4	0.5	0.000

Notes: Characteristics of victims and non-victims in NZCVS cycles 1-4. Column 3 shows the difference between groups, Column 4 shows the p-value testing the equality of the characteristics. [a] Selected MH problems based on Bowden et al. (2020). N=26,580. Estimates based on weighted data. → back to data

Labour market - average effects

	Victim		Interpersonal vio.		Serious offence	
	Pre-trend p-value	Estimate (S.E)	Pre-trend p-value	Estimate (S.E)	Pre-trend p-value	Estimate (S.E)
Earnings	0.543	-126.2 (61.9)**	0.308	-428.7 (132.8)***	0.551	-237.8 (73.0)***
Employed	0.087	-0.004 (0.003)	0.244	-0.011 (0.006)*	0.751	-0.013 (0.005)***
Benefits	0.519	27.6 (8.0)***	0.874	86.2 (20.4)***	0.278	55.6 (15.8)***

Notes: Effects of different types of victimisation on labour market outcomes. N=26,580. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
back to labour2

Health - average effects

	Victim		Interpersonal vio.		Serious offence	
	Pre-trend p-value	Estimate (S.E)	Pre-trend p-value	Estimate (S.E)	Pre-trend p-value	Estimate (S.E)
Injury claim	0.323	0.010 (0.003)***	0.586	0.005 (0.007)	0.592	0.012 (0.006)**
Outpatient visit	0.426	0.005 (0.004)	0.222	0.018 (0.008)**	0.503	0.006 (0.007)
Hospitalisation	0.153	0.001 (0.002)	0.771	-0.007 (0.005)	0.155	0.009 (0.004)**
Any mental health problem	0.057	0.004 (0.002)	0.292	0.000 (0.006)	0.595	0.004 (0.004)

Notes: Effects of different types of victimisation on labour market outcomes. N=26,580. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.   back to health

Robustness checks (1)

	(1) Baseline results	(2) Sampling weights	(3) Balanced panel	(4) Doubly robust	(5) Victims only
Earnings	-237.8 (73.0)***	-271.8 (118.0)**	-226.3 (78.8)***	-239.5 (73.0)***	-747.4 (478.4)
Employed	-0.013 (0.005)***	-0.020 (0.006)***	-0.015 (0.005)***	-0.014 (0.005)***	-0.031 (0.020)
Benefits	55.6 (15.8)***	58.5 (15.0)***	58.1 (18.1)***	55.0 (15.8)***	277.4 (153.6)*

Notes: This table summarises various robustness tests. Each cell shows the aggregated average effect of a serious offence from a separate DiD model. Column 1 reproduces the baseline results. Column 2 uses person weights to account for the non-random sampling in NZCVS. Column 3 restricts the analysis to a balanced panel of individuals who are observed in each quarter. Column 4 applied the doubly robust estimation method of Callaway and Sant'Anna (2021). Column 5 excludes non-victims and compares victims to those who are victimised at a later date. The different outcome variables are indicated on the left. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
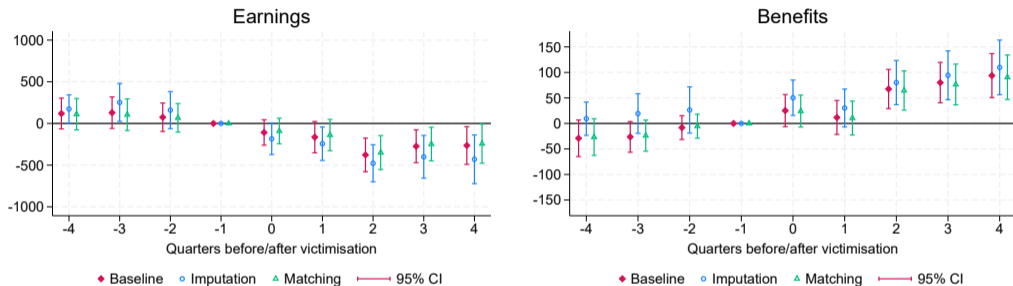
▶ back to conclusion

Robustness checks (2)

Figure: Different estimation approaches for labour market effects after serious offences

▶ back to conclusion

Heterogeneous effects

	Victim		Interpersonal vio.		Serious offence	
	Female	Male	Female	Male	Female	Male
Earnings	-35.0 (59.1)	-248.4 (122.7)**	-270.7 (111.5)**	-674.2 (295.3)**	-239.1 (84.4)***	-231.8 (134.9)*
Benefits	28.7 (11.9)**	26.1 (9.6)***	98.1 (27.0)***	67.3 (30.9)**	57.2 (22.1)***	52.8 (20.3)***
Injury claim	0.006 (0.004)	0.014 (0.005)***	0.009 (0.009)	-0.000 (0.012)	0.009 (0.007)	0.016 (0.009)*
Outpatient visit	0.003 (0.005)	0.008 (0.006)	0.021 (0.011)**	0.013 (0.012)	0.006 (0.009)	0.005 (0.011)
Any mental health problem	0.006 (0.004)*	-0.000 (0.003)	0.001 (0.008)	-0.001 (0.008)	0.004 (0.006)	0.005 (0.006)

▶ back to conclusion