

# Note: The importance of annual longitudinal data for the purposes of measuring and understanding domestic violence

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# 1 Introduction

There is a small but growing number of studies that use longitudinal administrative records to analyse the impact of domestic violence on a range of outcomes for victim-survivors (Adams et al. 2024; Bhuller 2024; Bindler and Ketel 2022). The benefit of these analyses is that it is possible to identify and quantify the impact of experiencing domestic violence over long periods of time, using very large sample sizes. One limitation of using administrative data is that they capture a non-random and incomplete selection of victim-survivors. For example, administrative hospital records tend to capture the most severe forms of physical abuse, while criminal police records capture types of abuse that are classified as criminal behavior in a particular jurisdiction. In addition, criminal records only capture incidents that an individual actually reports to the police. In other words, in the area of domestic violence, an important limitation of administrative data is its inability to identify a representative or full (census) sample of victim-survivors, many of whom do not report the violence to anyone.

Longitudinal survey data with information on victimisation overcomes some of the limitations of administrative data. Australia is uniquely placed to have one such survey: the Australian Longitudinal Survey on Women's Health (ALSWH). While the survey is usually undertaken once every three years, it was undertaken annually for the survey's youngest birth cohort of women born between 1989 - 95. The survey was undertaken annually for these women between 2013 to 2017 (and again in 2019 and 2023). Summers et al. (2025) use this data to identify the causal impact of domestic violence on employment, educational attainment and mental health outcomes of victim-survivors. The authors were able to identify the causal impact in part because the data were annual. This note replicates selected analyses undertaken in Summers et al. (2025), but assumes that data were only available once every three years (in 2013, 2016 and 2019), in order to compare the results to those presented in Summers et al. (2025) and showcase the importance of *annual* longitudinal data for the purposes of understanding and analysing domestic violence.

## 2 Results

The analyses presented in Summers et al. (2025), the accompanying technical report (Sobeck, 2025), and this note employ an event-study framework. An event-study framework transforms calendar-time into event-time. For example, using the ALSWH 1989-95 birth cohort, it is possible to identify the first year a woman reports experiencing intimate partner violence (IPV) between 2014 and 2017.<sup>1</sup> If there are two women, one who reports IPV for the first time in 2014 (woman 1) and one who reports it in 2015 (woman 2), it is possible to analyse the dynamics of abuse by transforming their data into event time. Event-time equals zero in the year a woman first reports IPV, one in the year following the violence and negative one in the year preceding the violence. In this example, event-time equals zero in 2014 for

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<sup>1</sup>The remainder of this note refers to IPV, rather than domestic violence, to denote the perpetrator is limited to cohabiting and non-cohabiting partners

woman 1 and 2015 for woman 2.

## 2.1 Quantifying the dynamics of abuse

Figure 1 (reproduced from Sobeck 2025) shows the type(s) of abuse that women experience in the first year women report experiencing IPV as an adult (event-time = 0). The figure separates abuse into mutually exclusive categories so that all bars add to 100 percent. The figure shows that at least half of women (50.1%) exclusively experienced emotional abuse in the year they first reported IPV, while 9.2% of women reported experiencing both physical and emotional abuse, and 9.1% of women experienced exclusively physical abuse.

However, Sobeck (2025) goes on to explore the dynamics of abuse that women experience in the subsequent year (event-time=1) when they have exclusively reported experiencing emotional abuse in the first year (event-time=0). In other words, does abuse escalate to another form of abuse or does it remain the same? Figure 2 shows that the majority of women (62.1 per cent) who only experience emotional abuse in the first year, also experience exclusive emotional abuse in the subsequent year (among those women who report experiencing IPV in both years). But conversely, for 39.9 per cent of these women their experience of violence changed in the subsequent year. For example, 24.2 per cent of these women experience physical violence (either exclusively or with other types of violence) in the subsequent year. If we did not have annual data for the subsequent year, this escalation analysis would be challenging to undertake as we would not have data on the dynamics of abuse each year over time.

Without (at least) annual data permitting disaggregation by type of abuse, it is very challenging to quantify how the dynamics of an abusive relationship may change over time, identify potential typologies of abuse, or quantify the impact of different types of abuse and abuse patterns on various outcomes. For example, claims that 'emotional abuse' is less detrimental than physical violence could be dispelled with data available on an annual basis. Such an analysis would prove useful in light of research on coercive control which documents that perpetrators may rely more on the threat of physical abuse, rather than physical abuse itself. Annual data (or data collected even more frequently) also permit quantification of the cumulative effect of different types of abuse over time.<sup>2</sup>

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<sup>2</sup>Data at a less frequent periodicity also permit this, however, it can be difficult to isolate the cumulative impact of one instance of abuse from repeated instances of abuse if there are large lags between surveys.

Figure 1. Type(s) of domestic violence reported in the first year intimate partner violence is reported (event-time=0)

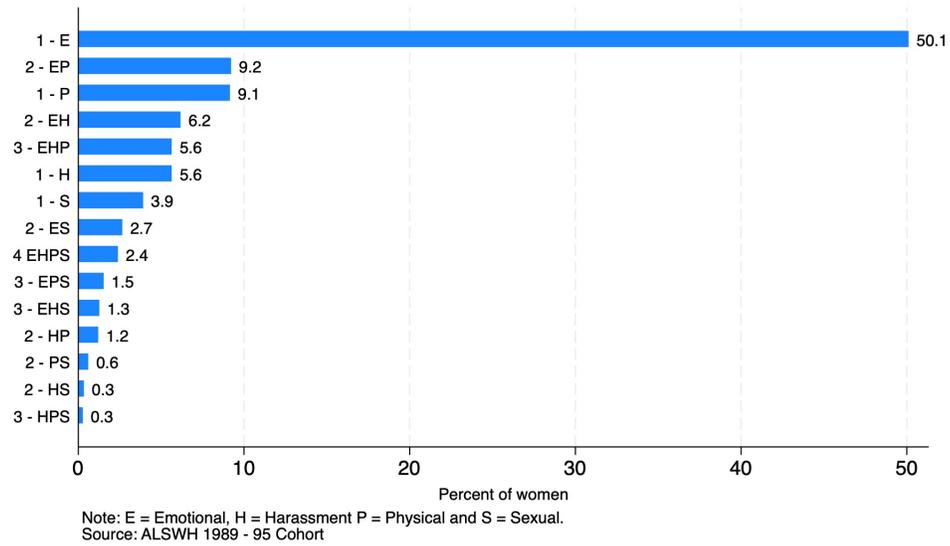
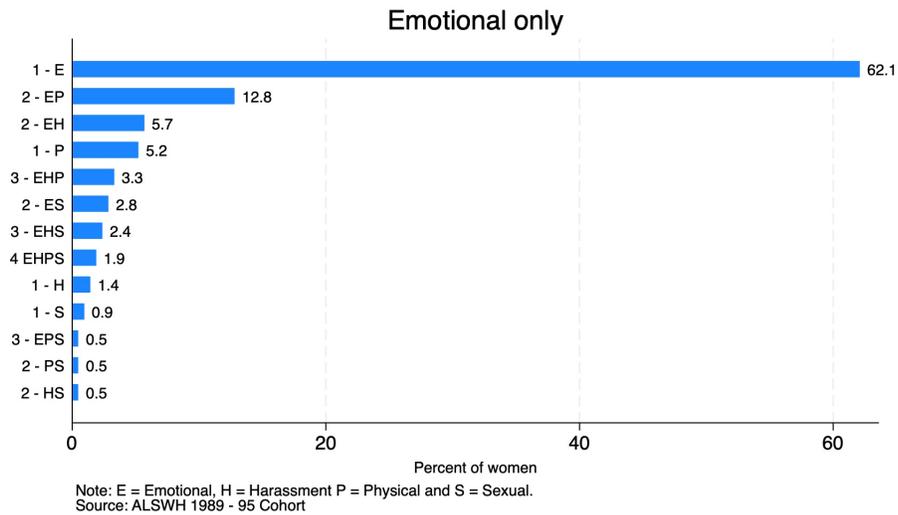


Figure 2. Type(s) of domestic violence reported in event-time=1 if exclusive emotional abuse is reported in event-time=0



## 2.2 Quantifying the impact of IPV on different outcomes

IPV can impact a range of women's outcomes from their employment, to educational attainment, relationship status, and mental and physical health, among others. Some of these outcomes can only change once, such as university degree attainment or the birth of a child. For example, once one has a university degree or has had a child, one cannot not have the degree or a child. By contrast, other outcomes can change over time. For example, someone can enter a relationship, leave a relationship and re-enter a different relationship. An individual's mental health can also decline, improve and decline again. Some of the outcomes that change over time can also change by different magnitudes. For example, an individual can increase their hours worked by 10 hours, decrease by 7, and increase again by 2 hours.

The variation in outcome variables presents different implications for the availability (or lack thereof) of annual data. For example, for university degree attainment, if domestic violence has impacted education, the lack of a degree (or a slower pace of degree attainment) will eventually emerge in the data, irrespective of whether it is collected annually or triennially. By contrast, relationship dynamics can change quite quickly. The importance of annual data emerges when the percent of women in a partnered relationship using annual data in Figure 3 is compared to Figure 4 which uses triennial data. Figure 3 shows that about 10 percent of women who experience domestic violence are no longer in a relationship in the year IPV is first reported. By contrast, the triennial data in Figure 4 shows that women who experience IPV remain in a relationship. The different findings about relationship status present different policy implications.

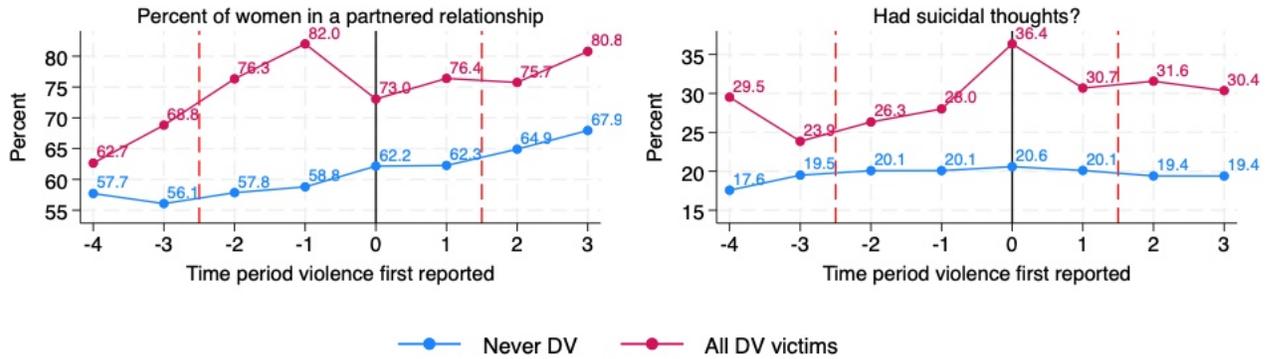
Identifying causal effects of IPV, rather than correlation, on any outcome will also be more challenging with triennial data. Causality is important because it attempts to strip away the effect of other confounding factors. Eliminating (to the extent possible) other confounding factors is helpful because it informs appropriate policy responses. Causality helps answer important policy questions such as, "Does a deterioration in mental health cause IPV or is it vice versa?". If the deterioration in mental health causes IPV, policy resources should be directed at redressing the mental health of individuals in order to reduce IPV. By contrast, if the opposite is the case (IPV causes a deterioration in mental health), directing resources at mental health support may not be the most appropriate use of resources to reduce the incidence of IPV.

To identify causal effects, it is important to observe someone just before and then immediately following a particular policy change or 'event', such as IPV. Otherwise it can be difficult to attribute the causal effect to the event, rather than something else that may have occurred; these challenges compound when the periodicity of data is less frequent. By way of example, Figures 3 and 4 show the percentage of women who have suicidal thoughts using annual and triennial data. Broadly speaking, both figures show that the percentage of women who have suicidal thoughts spikes when women experience violence and declines thereafter. This is much more compelling with annual data, which shows an immediate decline the year following the violence. However, with triennial data, it is more challenging to attribute the

spike in suicidal thoughts to the violence because of other potential confounders that emerge in the years leading up to the violence. For example, if a woman loses her job for a protracted period, the decline in mental health could not only precede but also coincide with the violence; greater frequency data allow researchers to test some confounders.

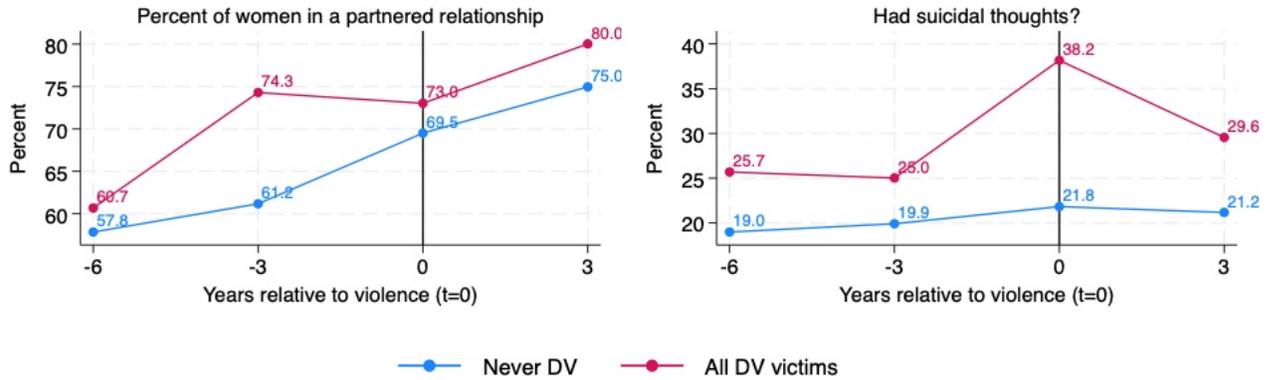
Less frequent data also limit identification of, and differentiation between, the short and long-term persistence of effects. Figure 5 (reproduced from Sobeck, 2025) presents the same data as Figure 3, but disaggregates the sample by type of abuse a woman experiences (top left) and the number of years a woman reports domestic violence (top right). The top right figure shows that among women who report IPV in at least two years, the percent of women who report suicidal thoughts spikes when the violence occurs (in event-time=0) and that the negative effect on their mental health persists while the violence persists (in event-time=1 and event-time= 2). By contrast, among women who only report IPV once, the percent of women who have suicidal thoughts declines to pre-IPV levels once the violence stops (in event-time=1). While both annual and triennial surveys ask about experiences of violence retrospectively, in the years where a survey was not undertaken (with triennial data), data will not be able to capture the corresponding mental health outcomes in those years to be able to estimate the duration and persistence of the effects.

Figure 3. Different outcomes preceding and following the first year (event-time=0) a woman reports experiencing IPV (annual data)



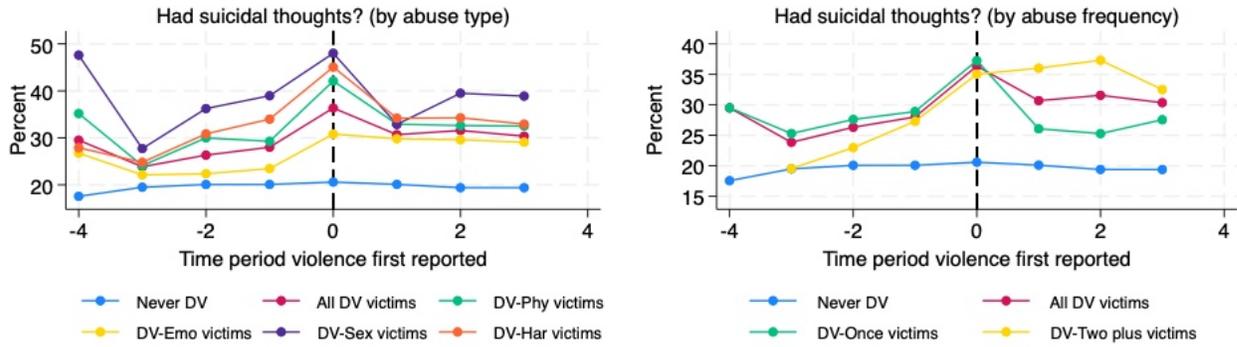
Note: Zero represents the first time a woman reports domestic violence. The two dashed red lines represent the event window (t=-2 to t=1) wherein the average captures at least three cohorts of victim-survivors of domestic violence.  
 Source: Author's calculations using the ALSWH.

Figure 4. Different outcomes preceding and following the first year (event-time=0) a woman reports experiencing IPV (triennial data)



Note: Zero represents the first year a woman reports domestic violence. Analyses use triennial data.  
 Source: Author's calculations using the ALSWH.

Figure 5. Impact of domestic violence on mental health, by type of abuse and number of years a woman reports experiencing IPV (annual data)



Note: Zero represents the first time a woman reports domestic violence. The two dashed red lines represent the event window (t=-2 to t=1) wherein the average captures at least three cohorts of victim-survivors of domestic violence.  
 Source: Author's calculations using the ALSWH.

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