# Partner Violence and the Financial Well-Being of Women: HILDA Research Results

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### 1 Background

What follows explains the analysis and documents the results of research into the financial consequences of physical violence perpetrated against Australian women in domestic partnerships. We seek to address the question: what are the financial implications for women who experience partner violence (PV)?<sup>2</sup> The analysis uses data from the Household, Income and Labour Dynamics in Australia (HILDA) panel, which has about 19,000 observations surveyed annually since 2001.

There are other Australian data sets which document women's experience of PV, including the periodic ABS Personal Safety Survey (PSS) and the on-going Australian Longitudinal Study on Women's Health (ALSWH). But with our focus being on the potential of PV to affect myriad aspects of financial well-being, the examination of HILDA has several critical advantages:

- (i) It is clear that cross-section data sets such as the PSS have the advantage of allowing fairly widespread documentation of the incidence and details of PV but are limited in terms of understanding the antecedents and consequences of PV. Panel data sets such as HILDA have much to contribute in this regard because the same people are followed over time; and
- (ii) Unlike ALSWH, HILDA has comprehensive information concerning the labour market and financial experience of people, in both great detail and over time, data which are essential information for our purposes.

For our purposes the case for analysis of HILDA is compelling, although there are critical issues associated with the sample restriction approach made necessary by the PV survey questions used.

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 $<sup>^{2}</sup>$  In interpreting what follows it is worth noting that in social science causal inferences can never be made with complete certainty, although with respect to the associations uncovered and reported below, we believe the drawing of such conclusions is credible.

The paper begins with a discussion of the main characteristics of HILDA pertinent to an investigation of the apparent financial consequences of PV and explains the basis of our sample selection approach in the context of the identification of PV (Section 2). This is followed by a description of the financial breakdowns available in HILDA, and the methodological approach we have employed in our exploration of the associations between PV and measures of financial well-being. Sections 4 and 5 present and discuss the results for mothers and childless women separately.

### 2 Issues Related to the Use of HILDA

A critical issue relates to our choice concerning the HILDA sub-sample we are examining, which includes both mothers and childless women observed in domestic partnerships and who then separate. We know if these women reported the experienced or otherwise of physical violence around the time of the separation, and we use this classification to explore the post-separation financial circumstances of these women relative to those who did not report an experience of physical violence. A very important question is, why did we focus on this subset of women?

The reasons are two-fold. The first is that to attempt to properly understand the potential contribution of PV to future financial outcomes, it is very important to know the "before" and "after" separation circumstances of women who experience violence. This goal explains why it is that panel data (following the same individuals over time) such as in HILDA are essential to our exercise.

The second issue relates to the interpretation of the experience of "violence" and whether or not this can reasonably be described as domestic/partner in origin. On this topic there is a key limitation in the use of HILDA to help in an understanding of the economic consequences of PV. Specifically, while HILDA respondents are asked about their experience of physical violence<sup>3</sup>, they are not asked whether the assault involved a domestic partner. There is therefore the potential that these reported experiences of physical violence could have originated in other circumstances, such as at work, in a social gathering, or with respect to being robbed.

The lack of precise identification of the origin of the violence experienced explains why we focus on women who separate after the experience of violence. This is because we are confident that most, even the vast majority, of the violence reported by the women in our selected HILDA sample is domestic in origin simply because it is much likely that separation would follow from partner violence than if the violence did not involve a partner. Thus, it seems to follow that a preponderance of the separations identified in HILDA occurred *because of, and not incidental to,* the violence having been perpetuated by a partner.

It is instructive that the PSS shows that, of women who had ever experienced physical violence, in 53 per cent of cases the violence was perpetuated by the current or a previous partner. Since

<sup>&</sup>lt;sup>3</sup> The question is posed as follows: "We now would like you to think about major events that have happened in your life over the past 12 months. For each statement cross either the YES box or the NO box to indicate whether each event happened during the past 12 months:...Victim of physical violence (e.g., assault)".

this figure is for *all* women with some of the sample thus including women who were not with a partner, the figure must be an understatement of PV as applied to the women in our sample since all of them were in a partnership around the time the violence was reported.

There are other, albeit indirect, data from the PSS that are useful in an interpretation of the HILDA information. For instance, 42 per cent of all women who have had a previous partner have ever experienced PV, and 60 per cent of single and previously partnered mothers have ever experienced PV. But the critical reason for us believing that the vast majority of the HILDA identified violence is actually PV is the fact that the violence is closely followed by separation, which instils confidence that the experience is just about always traceable to the partner.

Of interest for the meaning of our method are the data showing physical assaults prior to, around, and following, separation for the women of our HILDA sample. These are shown in Figure 1.





*Source:* Household, Income and Labour Dynamics in Australia survey waves 6 to 19. *Notes:* The bars indicate 95% confidence intervals.

A very important point from the figure is that reports of physical violence by women in the wave around the experience of violence (t = 0) are very much higher than those reported 1 and 2 years before separation, and 1 and 2 years after separation; of the order of at least 2 to 3 times. This is the pertinent fact that led us to classify the violence immediately preceding separation as highly likely to be domestic in origin. While it has to be the case some of the violence reported in the wave of separation has not in fact originated from a partner, the data from Figure 1 illustrate

strongly that there is a very marked (and statistically significant) higher level of assault in the wave involving separation. These data are critical to understanding why we are comfortable with our use of the method in the classification of PV used.

It is instructive that our identification of PV in HILDA results in an average of around 2 per cent a year, compared with the annual rate of PV defined in the 2016 PSS of around 2.5 to 3 per cent. These data imply that our approach might be resulting in lower measures of PV from HILDA relative to estimates available from the PSS. Related to this, we are identifying only violence that is physical in nature, thus precluding the potentially large number of PV incidents that involve non-physical (such as emotional or financial) violence. Thus our definition clearly understates PV defined broadly and, separately, means that we are using a non-representative sample of PV women. But without the sort of classifications used we would be in a less certain position concerning the true source of HILDA reported physical assaults.

# 3 HILDA Financial Data and the Methodological Approach

### 3 (i) Observation categories

A précis of the empirical method we have used is as follows. The longitudinal nature of HILDA allows us to trace both the relationship histories of women over annual waves and observe the end of a cohabitation with a partner (whether marital or *de facto*). Critical for our purposes HILDA contains detailed data on the financial situation of respondents, documenting their preand post-separation incomes from all sources. Each wave of HILDA also has information concerning whether or not, and when, respondents experienced violence, meaning we have available considerable information concerning the financial circumstances of women before and after relationship dissolution with respect to their experience of violence.

The information was recorded by us over five-year periods for HILDA waves, with "t = 0" representing the period immediately following separation, and (t - 1), (t - 2) respectively being 1 and 2 years *before* the separation (known as "before"), and (t + 1) and (t + 2) being 1 and 2 years respectively *after* the separation (known as "after"). This restricted our sample to women observed to separate from a domestic partner between 2008 and 2017. Since five annual periods are required for the categories, the data used must begin in 2006 (and goes to 2019). To allow comparisons over time, we indexed incomes to produce financial data in real 2015-16 terms.

The four categories examined are women who were:

- (i) mothers unlikely to have experienced partner violence (to be labelled non-PV);
- (ii) mothers likely to have experienced partner violence (labelled PV);
- (iii) childless women unlikely to have experienced partner violence (labelled non-PV); and
- (iv) childless women likely to have experienced partner violence (to be labelled PV).

Table 1 shows the number of women for these categories from the 14 annual waves used. The sample sizes for mothers and childless women likely to have experienced PV are small, just 27

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|                    | Non-PV                    | PV              | Total       |
| Mothers            | 340                       | 35              | 375         |
| Childless women    | 268                       | 27              | 295         |
| Total              | 608                       | 62              | 670         |

and 35 respectively, which highlights the need for significant caution in the drawing of inferences.

### *3* (*ii*) Classification of contributions to financial well-being (Figure 1).

Figure 2, provided by HILDA, shows the multiple sources of household income. While it is straightforward to document the levels and changes of all components, we focus on the main annual income categories: the partner's contribution to household income (while the woman is partnered); the woman's wages and salaries; and, total government financial support received by women. These turn out to be key to understanding the interaction of PV with women's financial circumstances.

The analysis following compares the financial state-of-affairs of women while partnered, to their situation after separation, with "before" and "after" referring respectively to the averages of the income categories for (t - 2) and (t - 1), compared to the averages of the income categories for (t = 0), (t + 1) and (t + 2). Both levels and changes are shown, for mothers and childless women.



Source: Household, Income and Labour Dynamics in Australia survey User Manual Release 19 Figure 4.8.

#### 4 Financial Well-being: Mothers and PV

#### 4 (i) Changes in Equivalised Household Income

There are many ways to represent financial well-being, with arguably the most useful broad aggregate being "equivalised household income" (EHI). EHI is the total annual income of all household members adjusted for the number and age of people this income supports. Since children require less financial support than adults for any given level of material well-being, the measure is derived by weighting household income by household demography. Figure 3 shows the annual average EHI for PV and non-PV mothers, before and after separation.

Figure 3 Average Equivalised Household Incomes for Mothers (\$annual)



Source: Household, Income and Labour Dynamics in Australia survey waves 6 to 19.

*Notes:* The partner income component of EHI has been top-coded at the 99th percentile of unequivalised partner income in \$2015-16 (\$276,342)<sup>4</sup>.

<sup>&</sup>lt;sup>4</sup> The objective of this paper is to shed light on the change in financial circumstances accompanying separation of the typical woman – whether or not she is likely to have experienced PV. In quantitative research the notion of a 'typical' individual is usually synonymous with one of average characteristics. However, this can be problematic when examining incomes where a small number of individuals with very high incomes may have a disproportionate impact on the calculation of the average. In these instances the income of the 'average' individual may be considerably higher than the level of income of a 'typical' individual. This was especially apparent for the partners of the women in our HILDA sample. With this in mind, the estimates of household and partner income presented in what follows have been calculated assuming that partners in the top 1% of the partner income distribution had incomes of \$276,342 in \$2015-16. That is to say, partners with incomes above the 99th percentile are assumed to have incomes equal to the 99th percentile (top-coding). This top-coding of partner income is only relevant to 9 of the women in our sample.

The important points from Figure 3 are:

- (i) Mothers who eventually separate, and are likely to have experienced PV, have approximately the same annual EHIs than other mothers before separation, of the order of about \$54,500 compared to about \$56,000;
- (ii) Both PV and non-PV mothers receive far lower EHIs after separation, with the falls being of the order of at least an average of \$11,000 per annum;
- (iii) The reduction of EHI is far greater for PV mothers than is the reduction experienced by non-PV mothers, of around a *further* \$7,500 per annum on average for members of the former group; and
- (iv) In percentage terms the proportionate loss in average EHIs for PV mothers is very significantly higher than it is for non-PV mothers, of about 35 compared to 20 per cent for non-PV mothers.

These results can be broken down into the various main components: partner's income; own wages and salaries; and own government support payments.

#### 4 (ii) Changes in Partner's Income





Source: Household, Income and Labour Dynamics in Australia survey waves 6 to 19.

*Notes:* Partner income has been top-coded at the 99th percentile of unequivalised partner income in \$2015-16 (\$276,342).

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The important points from Figure 4 are:

- (i) The equivalised income of mother's partners are identical for PV and non-PV women, and around \$33,000 per annum; and it follows that
- (ii) the loss of partner's income following separation must also be identical for PV and non-PV women.
  - 4 (iii) Changes in Wage and Salaries



Source: Household, Income and Labour Dynamics in Australia survey waves 6 to 19.

The important points from Figure 5 are:

- Before separation the equivalised annual wages and salaries incomes for PV mothers are similar to, but slightly lower than, those of non-PV mothers, being about \$11,500 and \$14,000 respectively;
- (ii) After separation the equivalised annual wage and salary incomes increase for both groups, but the increase for the PV women of about \$2,000 is very much lower than the increase for non-PV women of about \$6,000; and
- (iii) In proportionate terms, the wage and salary income of PV women increases by about 20 per cent which is considerably lower than that observed for non-PV women, at just over 45 per

cent. In work to be developed, it will be explained that much of this difference is attributable to disparities in the employment rates. Hours worked for those previously working, and hourly wage rates, are essentially unchanged.

### 4 (iv) Changes in Government Support Payments





Source: Household, Income and Labour Dynamics in Australia survey waves 6 to 19.

The important points from Figure 6 are:

- (i) Government support payments for all mothers increase substantially following separation, by about \$9,500 and \$8,500 per annum for PV and non-PV mothers respectively, which is the result of the contribution of means-testing of benefits in the context of the presence of children for women whose equivalised household incomes are now much lower; and
- (ii) Proportionately the increase is greater for non-PV mothers, partly reflecting the fact that they come off a lower base before separation.

There are several key findings from the above results, which allow a fairly straightforward story to be told with respect to the financial situation of separated mothers in the context of the experience of PV. The fundamental points are:

- (i) All mothers experience very significant decreases in equivalized household incomes after separation, of the order of at least 20 per cent on average;
- (ii) The decreased equivalized household incomes for PV mothers is very much higher than it is for non-PV mothers, being about \$18,500 and \$11,000 per annum respectively, which in proportionate terms is of the order of 35 compared to 20 per cent;
- (iii) The factor contributing most to the above outcomes is the post-separation labour market outcomes of PV and non-PV women, with the former experiencing only small increases in wages and salaries (of about 20 per cent) compared to larger increases for non-PV women (of about 45 per cent); and
- (iv) The increase in government support of about \$9,500 for PV mothers, and \$8,500 per annum for non-PV mothers, does mitigates to a small extent the substantial losses in the financial well-being of mothers after separation.

#### 5 Financial Well-being: Childless Women and PV

#### 5 (i) Changes in Equivalised Household Income

### Figure 7 Average Equivalised Household Income (EHI) for Childless Women (\$annual)



Source: Household, Income and Labour Dynamics in Australia survey waves 6 to 19.

*Notes:* The partner income component of EHI has been top-coded at the 99th percentile of unequivalised partner income in \$2015-16 (\$276,342).

The important points from Figure 7 are:

- (i) For PV and non-PV childless women there is little difference in the annual EHI in the period before separation, with both groups receiving around \$64-69,000 respectively;
- (ii) Both PV and non-PV childless women experience far lower EHIs after separation, the falls being at least \$12,000 per annum on average;
- (iii) The reduction of EHI is far greater for PV childless women than is the reduction for non-PV childless women, being at least an additional \$17,000 per annum for the former; and
- (iv) In percentage terms the proportionate loss in EHIs for PV childless women is very significantly higher than it is for non-PV income, that is, 45 versus 18 per cent.

### 5 (ii) Changes in Partner's Incomes

Figure 8 Average Equivalised Partner's Income for Childless Women (\$annual)



Source: Household, Income and Labour Dynamics in Australia survey waves 6 to 19.

*Notes:* Partner income has been top-coded at the 99th percentile of unequivalised partner income in \$2015-16 (\$276,342).

The important points from Figure 8 are:

- Partner's equivalised incomes are slightly higher for PV childless women compared to non-PV childless women, being about \$41,500 and \$38,000 respectively; and it thus follows that
- (ii) the loss of partner's income following separation is not greatly different for PV and non-PV childless women, but somewhat higher for members of the former group.

#### 5 (iii) Changes in Wages and Salaries





Source: Household, Income and Labour Dynamics in Australia survey waves 6 to 19.

The important points from Figure 9 are:

- (i) Annual (equivalised) wage and salaries received before separation are somewhat higher for non-PV childless women, being around \$16,000 and \$22,000 for PV and non-PV women respectively; and
- (ii) After separation the equivalised annual wage and salary incomes actually *decrease* for PV childless women, by about \$3,000 (a 20 per cent fall). This is in stark contrast to the significant income *increase* observed for non-PV childless women of around \$15,000 on average (a 70 per cent increase).

In work underway we explain that the contributions to the wage and salary changes for PV childless women can be attributed to a decrease in the employment rate, from 50 to 47 per cent, and a fall in hours worked of about 3 hours per week on average. There is also a small decrease in hourly wages, but the extent of the decrease is close to insignificant.



Figure 10 Average Equivalised Government Support Payments for Childless Women (\$annual)

#### 5 (iv) Changes in Government Support Payments

Source: Household, Income and Labour Dynamics in Australia survey waves 6 to 19.

The important points from Figure 10 are:

- Following separation government support payments increase for both PV and non-PV childless women, of the order of about \$3,500 and \$1,500 respectively, which will be due to the role of the means-testing of benefits;
- (ii) In proportionate terms the increase for PV and non-PV women are not very different and are 90 and 96 per cent respectively.
- 5(v) Summary

There are several key findings from the results which, similarly to the case for mothers, allow a fairly straight forward story to be told with respect to the financial situation of separated childless women in the context of the experience of PV. The fundamental points are:

(i) All childless women experience very significant decreases in EHI after separation, of the order of just under 20 per cent on average;

- (ii) The decrease in EHI for PV childless women is very much higher than it is for non-PV childless women, being about \$29,000 and \$12,000 per annum respectively, in proportionate terms of the order of nearly 50 compared to 20 per cent;
- (iii) The factor contributing most to the above outcomes is the post-separation labour market experiences of PV and non-PV childless women, with the former experiencing a *decline* in wages and salaries income (of about 20 per cent) compared to large *increases* for non-PV childless women (of about 70 per cent); and
- (iv) There is partial compensation as a result of additional government support following separation of about \$3,500 and \$1,500 per annum for PV and non-PV childless women respectively, which to some extent mitigates the substantial losses in the financial well-being of PV childless women after separation.

## 6 Some Simple Econometric Tests of Statistical Significance

There are four main findings from the analyses presented above, which are that after separation and compared to women who separate who do not experience PV:

- (i) For mothers experiencing PV there is a notable decrease in EHIs, of the order of an more than an additional \$7,000 per annum;
- (ii) For childless women experiencing PV there is a large decrease in EHIs, of the order of an additonal \$16,000 per annum;
- (iii) For mothers experiencing PV there is a large difference in equivalised wage and salary incomes, of the order of more than \$4,000 per annum; and
- (iv) For childless women experiencing PV there is a large difference in equivalized wage and salary earnings, of the order of more than \$18,000.

These are large differences in the financial circumstances for women experiencing PV. But a concern is that the results are not actually statistically significant which is a real possibility in empirical exercises limited by the number of observations. After all, in our data there are only 62 women likely to have experienced PV though the repeated sampling ensures the number of observations involved in statistical tests would be very much higher.

A further concern related to the use of the aggregated averages of our analysis is that we have not been able to control for the plethora of variables that contribute to both levels and changes of income, such as age, location and education. So far we have only been unable to highlight with confidence the independent association between the experience of PV and womens' financial circumstances subsequent to separation. This section reports the results of some basic econometric tests designed to address both issues.

We estimated<sup>5</sup> several Ordinary Least Squares regression models with both EHI and equivalized wage and salary annual incomes as dependent variables, which allowed tests of the statistical significance of the associations between these variables and the experience of PV, for both mothers and childless women. Further, we used so-called 'fixed effects' modelling which explicitly controls for the demographic and other individual-specific characteristics of all the women in our sample. In econometric terms, these approaches are about as strong as is possible with respect to isolating the roles of PV in terms of financial circumstances of the women in HILDA.

Table 2 presents the results of these estimations with respect to two issues: the size of effects and the statistical significance of PV (as indicated by t-statistics). We are able to compare the results of the econometric exercises with the relationships uncovered in the work with averages reported above. This is done for both income levels and percentage changes.

Table 2 suggests the larger post-separation income reductions associated with (likely) PV experience, observed in our descriptive analysis, are statistically significant with the exception of the EHI results for mothers. Nonetheless, Table 2 indicates a large and statistically significant reduction in wage income for PV mothers that is greater than that implied by our descriptive analysis (-\$7,188 versus - \$4,203). For childless women the fixed effects estimates for both EHI and wage income are highly significant and are in fact greater in magnitude for EHI than implied by our descriptive estimates (-\$22,769 versus -\$16,873).In summary, we feel confident that our estimates of the greater post-separation financial adversity of women likely to have experienced PV presented earlier are in 6 out of 8 cases statistically significant and generally larger than our earlier and more simple calculations suggest (certainlyat least as they pertain to reductions in labour incomes).

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|-------------|---------------|----------------|--------------------|----------|
|             | PV Mothers    |                | PV Childless women |          |
|             | Dollars       | %              | Dollars            | %        |
| Equivalised | Household Inc | ome            |                    |          |
| Average     | -7,615        |                | -16,873            |          |
| Modelled    | -6,126        | -11.8          | -22,769**          | -43.7**  |
|             | (-1.05)       | (-1.05)        | (-2.04)            | (-2.01)  |
| Equivalised | Wage and Sala | ry Income      |                    |          |
| Average     | -4,203        |                | -18,487            |          |
| Modelled    | -7,188****    | -39.8****      | -12,690***         | -70.4*** |
|             | (-3.58)       | (-3.33)        | (-3.03)            | (-2.86)  |

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| Comparison of Differences in the Change in Post-separation Incomes between PV and |
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*Notes:* t-statistics in parentheses Asterisks indicate level of statistical significance for \* p-values <0.10, \*\* p-values <0.05, \*\*\* p-values <0.01 and \*\*\*\* p-values <0.001.

<sup>&</sup>lt;sup>5</sup> This all happened through the input of Professor Lorraine Dearden. We are grateful for her assistance, technical expertise and generosity.

## 7 Discussion

We have been able to document the changed financial circumstances of separated women who are highly likely to have experienced PV relative to separated women who are far less likely to have had such an experience. In order to have confidence that the physical violence identified in the sample is domestic in origin, and to disaggregate the role of different factors in understanding of changed incomes, we have concentrated on women initially partnered who then separate. This allows us to decompose observed changes in incomes.

There are some very clear findings:

- Separation is associated with considerable (equivalised) household income losses for all women, at least 17 and up to 45 per cent on average irrespective of parental status; and
- (ii) Both PV mothers and PV childless women experience very much larger average income losses compared to women (whether mothers or childless), of the order of an additional 14 to 28 percentage points.

The major contributing factor to the more pronounced financial adversity of women likely to have experienced PV, compared to those less likely to have experienced PV, lies in the very small increases after separation (and in the case of childless women an actual decline) in the wages and salaries of PV women. This is in contrast to the major increases in wages and salaries of women who are unlikely to have experienced PV. There is quite clearly something associated with PV that is of considerable adverse importance for the subsequent labour market engagement of affected women.

That our data are highly imperfect is clear, and both the small sample sizes and the necessarily restricted approach to the identification and measurement of PV imply strongly that the results are not representative of the population as a whole; the analysis is indicative and certainly less than definitive.

Even so, the results of the econometric tests reported in Section 6 illustrate that in both statistical significance terms, and controlling for all individual characteristics, the basic messages hold up. While we are only part-way on a journey designed to uncover and reveal the real and complex story of the consequences of PV for the financial well-being of those affected, the evidence points solidly to the conclusion that PV is a key contributor to significant material disadvantage for those affected.