College of Policing

Vulnerability and Violent Crime Programme

Evaluating the use of family safety plans in cases of neglect: An exploratory analysis to understand the relationship between neglect, criminality and victimisation

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Research team

Professor Siddhartha Bandyopadhyay

Professor Catherine Hamilton-Giachritsis

Professor Matthew Cole

Professor Paul Montgomery

Dr Juste Abramovaite

Dr Emily Evans

Please address all queries to Professor Siddhartha Bandyopadhyay (overall evaluation lead) at **s.bandyopadhyay@bham.ac.uk**

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Key findings

- This report presents further analysis of outcome data for an intervention in place within Hampshire regarding child neglect. The intervention aims to improve agency responses to cases of neglect by police officers and staff working with social care and health services early on in cases, to avoid the need for a prosecution. Hampshire Constabulary introduced family safety plans (FSPs) and increased the use of out-of-court disposals (OOCDs), so as to reduce the use of Outcome 20 for cases of neglect. Outcome 20 disposals pass the case to Children's Services to deal with alone and close the police case. The results in this report are an extension of the quantitative analysis undertaken in the previous **evaluation report**. All caveats and interpretation of the results as outlined in the main report remain relevant for this analysis.

- In this additional report, we explore whether any of the children in families who were under an FSP later came to the attention of the police as suspects for any type of crime or anti-social behaviour. We feel that this should give an early indication of criminality linked to those who suffered child neglect and should identify whether early intervention through FSPs has the potential to prevent an intergenerational cycle of criminality and neglect. Given the vulnerability of these children, we also look at whether they were recorded as a victim during this period or were recorded as missing. We also look at whether there were differences across all of these measures between children in the intervention group compared to a control group.

- Initial outcome analysis (analysed in the main report) showed positive results for the intervention. Comparing the first six months of the intervention in 2019 with the same period in 2017 showed a 45% reduction in the use of Outcome 20 and a 12% increase in the use of OOCDs (both statistically significant changes). In addition, rates of child protection plan (CPP) use was 18% lower than during the historical period, a change that was statistically significant. This equated to approximately 40 fewer children on CPPs after FSPs were introduced.

- Analysis of further outcome data regarding the extent of victimisation (of any crime), offending behaviour (being a suspect of any crime) and missing person episodes was undertaken for the same historical control (July to September

2017) and intervention (July to September 2019) periods. These are presented in this report.

- This new analysis shows that the majority of those in the intervention and control groups did not become victims or suspects in this follow-up period, nor did they go missing. However, these events (becoming a suspect, victim or going missing) were all found to be significantly correlated with each other.

- Being on a CPP in the past three years was found to be positively and significantly correlated with becoming a victim of any crime again and a suspect of any crime within six months. This correlation may indicate the underlying vulnerability of the children or their being better monitored, rather than a causal link, and needs further analysis.

- Family difficulties (such as mental health or other health difficulties, or poor living conditions when noted by the police) were not found to be associated with the victimisation, suspect and missing person outcomes.

- Children in families who had been engaged in FSPs were no more or less likely to become a victim of crime than those in the control population. However, they were slightly less likely to be suspected of criminal or anti-social behaviour (5% less, significant at 10% level), or to be reported as a missing person (5% less, statistically significant).

- In 2019, when the use of community resolution (CR), an OOCD, went up after the intervention was introduced, the victimisation rate (of any crime) was 10% lower for those victims of neglect where CR was issued as a police outcome. However, the difference was not statistically significant. This might indicate less monitoring for those treated with a CR, but might also indicate a beneficial impact of CR. Once again, we think that this merits further analysis to see if the decriminalising impact of CR actually reduces victimisation.

- These results do not change substantially in a sub-group analysis undertaken by age and gender. The reduction in becoming a suspect of any crime remains significant for older children (ages 7 and above) for the intervention group, in line with the results of the whole sample.

- Overall, these results are promising, as we can see a significant reduction in some of the main outcome variables reported. However, longer follow-up and a larger sample are needed to analyse whether these effects are sustained.

- As outlined in the **main report**, there were concerns about the impact of the intervention on families (eg, increased stress, perceived criminalisation), which we do not repeat here.

Introduction

Neglect is the most common form of child maltreatment in the UK, accounting for approximately two-fifths of children on the Child Protection Register[1]. However, neglect is often not seen as a priority compared to other forms of maltreatment, what is known as the 'neglect of neglect'. It also requires proof of wilfulness, as the offence is defined as 'wilfully neglecting or mistreating a child'[2]. This can be problematic for police forces regarding gathering evidence of such wilfulness.

An intervention was implemented in Child Abuse Investigation Teams (CAITs) across Hampshire Constabulary that involved police staff and officers' work with Children's Services to avoid the need for a prosecution, or to better evidence the neglect if a prosecution was required. To this end, all Outcome 20 cases, where the police passed responsibility for the case to social workers, were also reviewed with the aim of reducing their number. Family safety plans (FSPs) were introduced to be completed with a family during a joint police–social work visit, to aid the development of clear (SMART) goals for families. The use of out-of-court disposals (OOCDs, including conditional cautions and community resolutions) was increased to allow the police to deal quickly and proportionately with low-level, often first-time offending and avoid a court prosecution. As part of this process, multi-agency safeguarding hubs (MASHs) referred all cases of neglect to CAITs for joint working with Children's Services.

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[1] Department for Education. (2018). **Working together to safeguard children: A guide to interagency working together to safeguard and promote the welfare of children**. London: TSO.
[2] Section 1 of the Children and Young Persons Act 1933, amended in May 2015 by Part 5, section 66 of the Serious Crime Act 2015.

An initial **mixed methods evaluation** was conducted of this new joint agency approach to neglect offences against children. The evaluation explored the effects of using FSPs and the increased use of OOCDs upon case outcomes and rates of child protection registration by comparing historical data (from 2017) to data from the intervention period (2019). Quantitative data analysis was complemented by qualitative interviews with practitioners involved in the intervention, to understand the processes and operation of the intervention.

Analysis of interviews with police officers showed that neglect was receiving more attention and identified many positive features of the new approach (for example, it was felt to be a useful way to work with families and to promote better collaboration with social work colleagues). However, there was consensus among police personnel that due to the broader changes (such as increased number of referrals), workloads had increased and there was a lack of clarity about the process (partly due to insufficient training), as well as individual differences in how FSPs were implemented. Statistical analysis showed a 45% reduction in Outcome 20 and a 12% increase in use of OOCDs (particularly community resolution) compared to 2017 data in the intervention areas. The analysis also showed 20% and 18% reductions in rates of referral for child protection plans (CPPs) within three and six months, respectively. This equates to approximately 40 fewer children on a CPP as a result of the intervention. In 2019, 26% of children with no prior CPP became the subject of a CPP in the follow-up six-month period, compared to 49% in 2017. For children with a prior CPP, the rates of becoming the subject of a CPP were 16% in the 2019 intervention data, a decrease from 29% in the historical 2017 data.

Description of data

This report outlines findings of further analysis of data from the historical and intervention periods regarding instances of victimisation, offending and missing person episodes of those young people whose neglect cases had been subject to the Hampshire intervention outlined above. It reports analysis of the number of times when each victim from the historical (July to September 2017) and intervention (July to September 2019) samples reappeared on police databases as a victim, reappeared as a suspect or was recorded as missing. The victimisation and offending data are for any offence, rather than neglect-type offences specifically.

This is due to the way in which police systems record the most serious offence type applicable. As such, cases of neglect that also involve other, more serious, offending could be missed if data for only neglect offences were analysed. While analysis of this more complete data provides more general findings regarding victimisation and offending, it does therefore avoid the risk of under-reporting such incidents. The data provided included offence summaries, which contained free-text details, which were coded by the researchers to identify any family difficulties mentioned by officers involved in the incident.

The anonymised IDs of individuals in our initial intervention and historical data sets were matched to this new data. New variables were created for the total number of times that individuals appeared as a victim, appeared as a suspect or were recorded as missing within six months, as well as binary variables for whether individuals became a victim, became a suspect or were recorded as missing in the six-month period (0 = No, 1 = Yes). In total, we have records of 394 victims of neglect: 193 from the historical period (July to September 2017), which acts as our control group, and 201 from the intervention period (July to September 2019), which is our intervention group. These are the same sample sizes as in the initial evaluation.

The characteristics of the 2019 intervention sample is as follows:

- the average age of the children was 6.5 years (range 0 to 16)
- 87 children (43.3%) were female and 114 (56.7%) were male
- 25% had previously been subject to a CPP

The characteristics of the 2017 historical sample were similar:

- the average age of the children was 6.2 years (range 0 to 16)
- 95 children (49.0%) were female and 99 (51.0%) were male
- 23% had previously been subject to a CPP

The sample for this analysis is small and the follow-up period is limited to six months, which limits the strength of the conclusions we can reach. Regarding missing person incidents in particular, there were only 13 such incidents across the intervention and control group in the follow-up period, limiting the analysis that could be conducted. However, this initial analysis does allow us to reach some conclusions on the effects of this intervention on a number of outcome measures.

Victimisation data

The majority of neglect victims (84.0%, N=394) from our initial samples were not recorded as a victim of any crime again within six months in this follow-up analysis. Overall, 18.0% (N=201) of victims of neglect in the intervention group became victims of any crime again within six months, compared to 14.0% (N=193) in the control group. The difference was not statistically significant (t(394) = -1.06, p=0.29). The number of times that victims of neglect appeared as victims again within six months is presented in Table 1 below. Most often, individuals who were victims in this period were so only once. While we do not have figures of how this compares to children who do not suffer from neglect, this appears higher than the average victimisation rate of children aged 10-15, which is 6.6%, as recorded by Crime Survey of England and Wales in the year ending March 2020[3].

Table 1: Victimisation in the follow-up period

Number of times recorded as a victim of any form of crime within 6 months	Intervention sample (N = 201)	Control sample (N=193)
0	165 (82.1%)	166 (86.0%)
1	26 (12.9%)	19 (9.8%)
2	0 (0.0%)	4 (2.1%)
3	7 (3.5%)	2 (1.0%)
4	3 (1.5%)	2 (1.0%)

The average age across both the control and intervention groups who also became a victim of any crime within six months is 7.9 years (range 0 to 16), while the average age for the total sample (N = 394) is 6.4 years (range 0 to 16). Of those who became

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[3] Office for National Statistics. (2020). **Crime in England and Wales - Office for National Statistics (ons.gov.uk)** London: ONS.

victims of any crime again, 57% were male. This is a slight over-representation of the total sample, where males accounted for just under 54%.

The family problem of physical assault was mentioned on the occurrence summary on 31.1% of cases for those who became victims of any crime again. This was mentioned only on 19.0% of cases for those who did not become victims again. The difference of 12.1 percentage points is statistically significant at 5% level (t(370) = -2.14, p=0.033). Problems with drugs were mentioned in 16.4% of cases for those who became victims of any crime again, but only in 11.9% cases for those who did not. This difference of 4.5 percentage points was not statistically significant.

Suspect data

The vast majority of children (94%) in both the control and intervention groups did not appear as suspects of any other crime within the six-month follow-up period. This finding may be linked to the young age of those involved in neglect cases. When compared, only 10 (5%) victims of neglect in the intervention group became suspects of any crime within six months, compared to 14 (7%) in the control group. This difference was not statistically significant. The number of times that victims of neglect appeared as suspects within six months is presented in Table 2 below. Of those who were considered a suspect in an offence in the follow-up period, 5 of 10 in the intervention group and 8 of 14 in the control group did so more than once.

Table 2: Suspect incidents in the follow-up period

Number of times appeared as a suspect within 6 months	Intervention sample (N=201)	Control sample (N=193)
0	191 (95.0%)	179 (92.8%)
1	5 (2.5%)	6 (3.1%)
2	2 (1.0%)	6 (3.1%)
3	0 (0.0%)	1 (0.5%)
4	2 (1.0%)	0 (0.0%)

Number of times appeared as a suspect within 6 months	Intervention sample (N=201)	Control sample (N=193)
5	0 (0.0%)	0 (0.0%)
6	1 (0.5%)	1 (0.5%)

The average age from both samples who became a suspect of any crime within six months was 10 years (range 3 to 15), in comparison to the average age for the total sample (N=394) of 6.4 years (range 0 to 16). Of those who became suspects of any crime, 63% were male. This is an over-representation of the total sample, where males accounted for just under 54%.

None of the family problems were significantly different (based on a difference in means test) between those who became suspects again and those who did not.

Missing person episodes data

The vast majority of victims (97%) from both our initial samples were not reported missing within the six-month follow-up. Only 13 young people across the full sample of 394 were reported missing in this period. This finding most likely reflects the young age of children in investigations for neglect. When compared by each group (intervention versus control), 2% of victims of neglect were reported missing within six months in the intervention group and 4% in the control group. The difference was not statistically significant. The number of times that victims of neglect were reported missing within six months is presented in the Table 3 below.

Table 3: Missing person incidents in the follow-up period

Number of times reported missing within 6 months	Intervention sample (N = 201)	Control sample (N=193)
0	196 (97.5%)	185 (95.9%)
1	3 (1.5%)	8 (4.1%)
2	2 (1.0%)	0 (0.0%)

All victims of neglect who were reported missing in the control sample (N=8) were reported just once within six months. In the intervention sample, three victims were reported missing once and two victims were reported missing twice.

The average age of a victim of neglect who was reported as a missing person within six months was 8.6 years (range 0 to 15). For the total sample (N = 394), the average age was 6.4 (range 0 to 16). Of those who were reported as missing, 58% were female, which is an over-representation of the total sample, where females accounted for just under 46%.

Further analysis shows that across the whole sample, becoming a victim again, becoming a suspect again and being reported as missing were all significantly correlated with each other. Becoming a victim again was significantly correlated with becoming a suspect at r=0.236 (p=0.000) and with being reported as missing at r=0.285 (p=0.000). Becoming a suspect of a crime significantly correlated with being reported missing at r=0.387 (p=0.000). Table 4 below reports the significant coefficients.

Table 4: Correlations between being a victim, suspect and missing across the whole sample (N=394)

	Suspect	Victim	Missing
Suspect	1	0.236	0.387
Victim	0.236	1	0.285
Missing	0.387	0.285	1

In the intervention group, becoming a victim of any crime within six months was positively and significantly correlated with being reported as missing at r=0.212 (p=0.003). Becoming a suspect was also positively and significantly correlated with being reported as missing at r=0.295 (p=0.000). Table 5 below reports the significant correlations.

Table 5: Correlations between being a victim, suspect and missing for the intervention group (N=201)

	Suspect	Victim	Missing
Suspect	1	Insignificant	0.295
Victim	Insignificant	1	0.212
Missing	0.295	0.212	1

In the control group, the binary variable of becoming a victim again was significantly correlated with becoming a suspect at r=0.463 (p=0.000) and with being reported as missing at r=0.366 (p=0.000). Becoming a suspect of a crime significantly correlated with being reported missing at r=0.443 (p = 0.000). Table 6 below reports the significant correlations.

Table 6: Correlations between being a victim, suspect and missing for the control group (N=193)

	Suspect	Victim	Missing
Suspect	1	0.463	0.443
Victim	0.463	1	0.366
Missing	0.443	0.366	1

These findings are perhaps to be expected, given the way in which being a suspect and victim can often come hand in hand, especially in crimes of violence[4] (although we do not know the crime types here). Similarly, victimisation can go hand in hand with becoming a missing person.

Family difficulties analysis

Data on the presence of family difficulties was collected for the total sample of the intervention and control groups where an occurrence summary was provided

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[4] Abramovaite J, Bandyopadhyay S and Dixon L. (2015). 'The dynamics of intergenerational family abuse: A focus on child maltreatment and violence and abuse in intimate relationships'. Journal of Interdisciplinary Economics.27(2), pp 160–174.

(N=371; 23 cases were missing). Occurrence summaries are recorded by police officers as free text. These were analysed and a series of binary variables created based on the difficulties, recorded in the same way as was done in the original evaluation. The main types of difficulty recorded were as follows:

- mental health issues

- drinking-related problems

- drug-related problems

- physical assault mentioned

- poor living conditions mentioned

- medical problems mentioned

In total, presence of family difficulties was recorded for 371 victims with 201 from the treatment and 170 from the control. Table 7 reports the distribution of the family difficulties in both the 2017 and 2019 sample.

Table 7: Number and percent of cases where family difficulties were noted, 2019 and 2017. Note that some cases had multiple family difficulties.

	Intervention sample (2019)		Control sample (2017)	
	%	N (201)	%	N (170)
Mental health	3.5%	7	2.9%	5
Drinking	15.9%	32	21.8%	37
Drugs	11%	22	15.3%	26
Domestic abuse	6%	12	6.5%	11
Physical assault	25.9%	52	15.9%	27
Poor living conditions	34.8%	70	38.8%	66
Medical problems	12.4%	25	14.1%	24

Out of all family difficulties described above, only physical assault was positively and significantly correlated with becoming a victim again of any crime in the following six months (r=0.111, p=0.033). The number of times that a victim of neglect became a victim of any crime in those six months show a similar significant correlation with physical assault (r = 0.109, p=0.036). Becoming a suspect of any crime or being reported as missing were not significantly correlated with any of the family difficulties.

For the intervention group only, none of the family difficulties described above showed any significant correlations with becoming a victim again, becoming a suspect or being reported as missing.

For the control group only, physical assault was positively and significantly correlated with being reported as missing at r = 0.153 (p=0.045).

Child Protection Plan

Data on CPPs was available for three years before and six months after the index referral (in July to September 2017 or in July to September 2019). We considered:

- whether a child was the subject of a CPP in the past three years at least once (binary variable created)

- whether a child was the subject of a CPP within six months after our sampling period (binary variable created)

Analysis of this data showed that for the whole sample (intervention and control group combined), there is a negative and significant correlation between being the subject of a CPP in the past three years and having a CPP within six months after (r=-0.149, p=0.003). Being on the CPP in the past three years is also positively and significantly correlated with becoming a victim of any crime again within six months (r=0.159, p=0.002) and with becoming a suspect of any crime within six months (r=0.154, p=0.002). This is an interesting finding. Although the correlation is not strong, it shows that there is potentially a link between CPP referrals and becoming a victim or suspect some years later. Indeed, there is no significant correlation in this data within the six months between CPP referral and becoming a victim or suspect. These findings are outlined in Table 8 below.

Table 8: Correlations regarding use of CPPs and being a victim or suspect, for the whole sample

	CPP last 3 years	CPP 6 months after	Victim	Suspect
CPP last 3 years	1	-0.149	0.159	Insignificant
CPP 6 months after	-0.149	1	Insignificant	Insignificant
Victim	0.159	Insignificant	1	0.236
Suspect	Insignificant	Insignificant	0.236	1

For the intervention group only, being on the CPP in the past three years is positively and significantly correlated with being reported missing in the six-month follow-up (r=0.163, p=0.021).

For the control group only, there is a negative and significant correlation between being on the CPP in the past three years and being referred to the CPP within six months after (r=-0.164, p=0.023). Also, being on the CPP in the past three years is positively and significantly correlated with becoming a victim of any crime again within six months (r=0.208, p=0.004) and with becoming a suspect of any crime within six months (r=0.181, p=0.012). These are outlined in Table 9 below.

Table 9: Correlations regarding use of CPPs and being a victim or suspect, for the control group

	CPP last 3 years	CPP 6 months after	Victim	Suspect
CPP last 3 years	1	-0.164	0.208	0.181
CPP 6 months after	-0.164	1	Insignificant	Insignificant
Victim	0.208	Insignificant	1	0.463

	CPP last 3 years	CPP 6 months after	Victim	Suspect
Suspect	0.181	Insignificant	0.463	1

Analysing the family difficulties described in the section above showed that these were not significantly correlated with whether a victim (across the intervention and control groups) was on the CPP in the past three years or whether a victim was put on the CPP three or six months after neglect was recorded.

Out-of-court disposal: Community resolution

One of the main outcomes observed after the intervention started in 2019 was the significant increase in the use of OOCDs, such as community resolution (CR). In the 2019 sample (intervention group), around 11% of total cases (N=22) were issued with a CR as a police outcome. Table 10 below reports the differences in means between those cases (with CR outcome) when compared to the rest of cases (all other outcomes) of becoming a victim of any crime, becoming a suspect of any crime or being reported as a missing person within six months.

Table 10: Effect of police outcome on outcomes for individuals

Within 6 months, being:	Intervention group Community resolution issued as a police outcome			Intervention group All other police outcomes					
	Mean	SD	N	Mean	SD	N	Difference	t	p
A victim of **any** crime	0.09	0.06	22	0.19	0.03	179	-0.10	1.14	0.26
A suspect of **any** crime	0.00	0.00	22	0.06	0.02	179	-0.06	1.14	0.26
Reported as a missing person	0.00	0.00	22	0.02	0.01	179	-0.02	0.71	0.48

In those cases with a CR as a police outcome, 9% of victims (of neglect) became victims of any crime within six months. For all other police outcomes, the rate of becoming a victim again (of any crime) was 19%. The difference of 10 percentage points was not statistically significant. None of the cases where suspects were issued a CR as a police outcome became suspects of any other crime or were reported as a missing person within six months. The differences of 0.06 and 0.02, respectively, with those issued other police outcomes were not statistically significant. However, the sample size for the CR group is small and we would need to analyse this over a larger sample to be able to draw firm conclusions.

Propensity score matching analysis

We used propensity score matching to minimise the differences between the treatment and the control group based on observable characteristics. The intervention and control groups were matched on the following covariates:

- age of the child

- gender of the child

- presence of multiple suspects per child

- whether the child was the subject of a CPP in the past three years

- adult with excessive alcohol consumption marker

- drugs marker

- domestic violence marker

- physical assault marker

- poor living conditions marker

- medical difficulties marker

We started by matching the intervention and control group samples and then checking if matching made differences between them insignificant. Table 11 below shows the descriptive statistics of the matched and unmatched samples.

Table 11 Descriptive statistics of matched and unmatched samples

	Unmatched or matched	Mean		% bias	T-test	
		Treated	Control		t	p>|t|
Physical assault	Unmatched	0.25	0.16	23.6	2.24	0.03
	Matched	0.25	0.25	0.4	0.01	0.97
Gender (victim)	Unmatched	1.57	1.51	11.1	1.07	0.29
	Matched	1.57	1.57	-1.3	-0.13	0.89
Age (victim)	Unmatched	6.55	6.31	5.6	0.54	0.59
	Matched	6.53	6.17	8.2	0.81	0.42
CPP in past 3 years	Unmatched	0.25	0.24	2.0	0.28	0.78
	Matched	0.25	0.22	6.2	0.63	0.53
DV related	Unmatched	0.06	0.06	-2.1	-0.20	0.84
	Matched	0.06	0.05	4.1	0.44	0.66
Poor living conditions	Unmatched	0.35	0.37	-4.6	-0.45	0.66
	Matched	0.35	0.35	-0.3	-0.03	0.97
Medical problems	Unmatched	0.12	0.14	-4.9	-0.48	0.63
	Matched	0.13	0.13	0.0	0.00	1.00
Drugs	Unmatched	0.11	0.14	-9.6	-0.92	0.36
	Matched	0.11	0.11	0.0	0.00	1.00

		Mean			T-test	
	Unmatched or matched	Treated	Control	% bias	t	p>|t|
Multiple suspects	Unmatched	0.25	0.31	-12.9	-1.24	0.22
	Matched	0.26	0.24	3.3	0.35	0.73
Alcohol	Unmatched	0.16	0.22	-14.9	-1.44	0.15
	Matched	0.16	0.16	2.1	0.23	0.82

We can see from Table 12 that matching led to both groups (intervention and control) having more similar characteristics. Means of matched and unmatched groups are presented on the left of the table, and we can see how close the characteristics between intervention and control groups after the matching are. Standardised bias after matching is under 10% for all covariates and t-tests demonstrate that all the differences after matching were not significant (see Figure 1).

PSM - Matching Covariates

	Standardized % bias across covariates
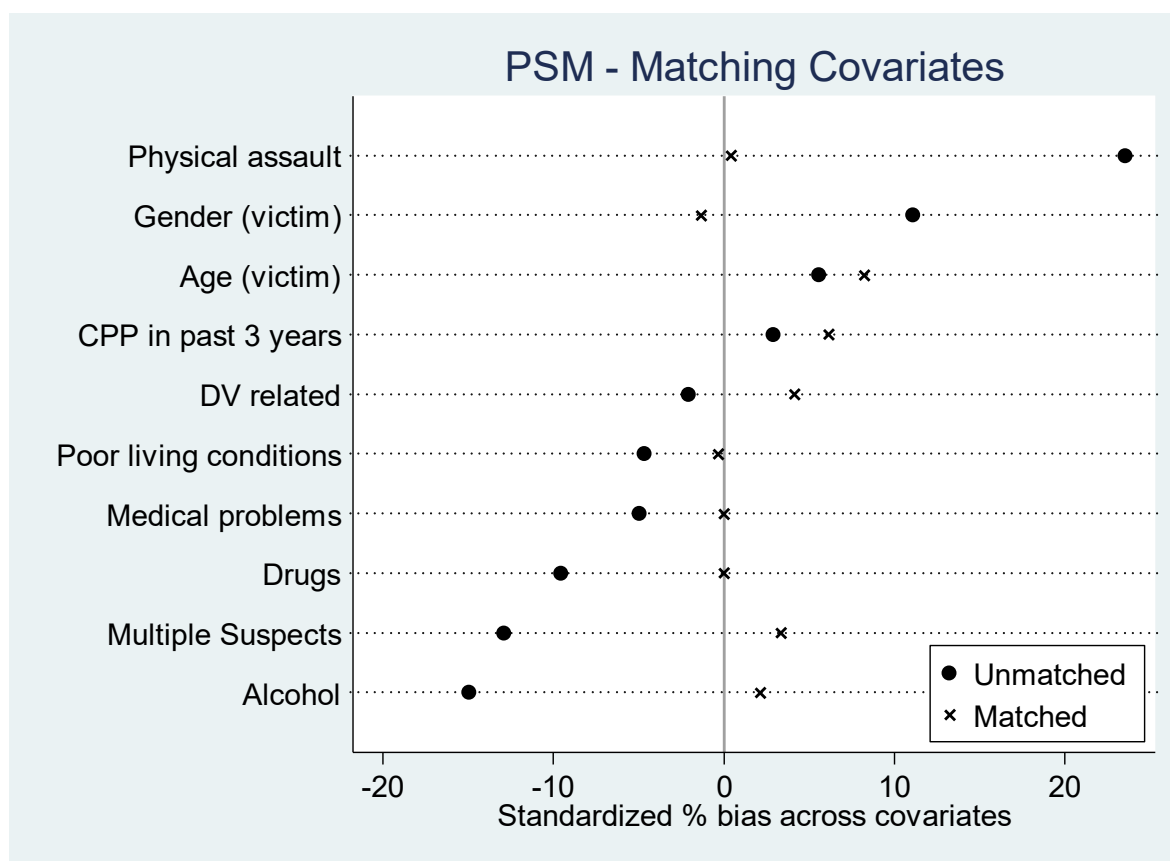
Figure 1. Propensity score matching – matching covariates illustration

After matching intervention and control groups, a nearest-neighbour matching method with replacement with common support was used. This option imposes a common support by dropping intervention observations whose propensity score is higher than the maximum or less than the minimum of the controls. We then calculated the average intervention effect of becoming a victim of any crime within six months, becoming a suspect of any crime within six months and being reported as a missing person within six months after neglect was reported. There were 200 matched pairs found (compared to 394 cases across both groups) and results are reported in Table 13 below.

Table 13: Propensity score matching average intervention effect for victimisation, suspect and missing person outcomes

Variable	Sample	Intervention	Control	Difference	SE	t-tests
Outcome 20	Before matching	0.01	0.45	-0.45	0.04	-12.46*
	After matching	0.01	0.45	-0.45	0.04	-11.62
Community resolution	Before matching	0.11	0	0.11	0.02	4.64*
	After matching	0.12	0	0.12	0.13	4.88*
CPP in 3 months	Before matching	0.23	0.45	-0.23	0.05	-4.57*
	After matching	0.24	0.45	-0.21	0.05	-3.55*
CPP in 6 months	Before matching	0.25	0.45	-0.20	0.05	-4.10*
	After matching	0.26	0.44	-0.18	0.06	-3.17*
Victim of **any** crime within 6 months	Before matching	0.18	0.15	0.03	0.04	0.83
	After matching	0.18	0.16	0.02	0.04	0.42
Suspect of **any** crime within 6 months	Before matching	0.05	0.08	-0.03	0.03	-1.27

Variable	Sample	Intervention	Control	Difference	SE	t-tests
	After matching	0.05	0.10	-0.05	0.03	-1.89*
Reported as a missing person within 6 months	Before matching	0.02	0.04	-0.02	0.02	-1.20
	After matching	0.02	0.07	-0.05	0.02	-2.11**

* Statistically significant (at least 10% level)

** Statistically significant (at least 5% level)

Before matching, the rate of becoming a victim in the intervention group was 18%. This remained unchanged after matching. In the control group, it increased from 15% before matching to 16% after matching. The difference in becoming a victim of any crime between the intervention and control groups after matching was 2 percentage points higher in the intervention group, which was not statistically significant.

Before matching, the rate of becoming a suspect in the intervention group was 5%, which remained unchanged after matching. In the control group, it was 8% before matching and 10% after matching. The difference in becoming a suspect of any crime between intervention and control groups was -5 percentage points (lower in the intervention group) after matching, which was statistically significant at 10% level.

Finally, with respect to being reported as a missing person within six months, the rates were 2% for the intervention group before and after matching. In the control group, the rates rose from 4% before matching to 7% after matching. The difference in being reported missing of -5 percentage points (lower in the intervention group) after matching is statistically significant, indicating that the intervention affected the likelihood of neglect victims being reported as a missing person in the following six months.

The children in the FSP intervention appear to be at higher risk of being a suspect or victim compared to the general population. There is also some correlation between being a suspect or victim and going missing. The FSP intervention shows promising results, as we can see a significant reduction in two outcome variables of becoming a suspect and going missing. Additionally, we have seen reductions in going on a CPP in the intervention group. A longer follow-up and a larger sample is needed to analyse if these effects are sustained (ie, whether the FSP intervention can help reduce the cycle of vulnerability for these children).

We want to ascertain whether similar results hold across different victims' profiles, thus we again use propensity score matching on various sub-groups corresponding to different victims' profiles within our data set.

Sub-group analysis by gender

Male-only sample

In total, 212 victims of neglect (54%) in our data set were identified as males. Using propensity score matching, as described earlier on page 15, we obtained the average intervention effect for the male-only sample. A table with descriptive statistics of matched and unmatched samples, including the list of covariates used for matching, is available in Appendix A1.

Sub-group analysis by gender

Table 14: Propensity score matching: average intervention effect (male victims only)

Variable	Sample	Intervention	Control	Difference	SE	t-stats
Outcome 20	Before matching	0.00	0.50	-0.50	0.05	-10.62**
	After matching	0.00	0.44	-0.44	0.07	-6.45**
Community resolution (OOCD)	Before matching	0.13	0.00	0.13	0.04	3.63**
	After matching	0.13	0.00	0.13	0.03	4.14**
CPP in 3 months	Before matching	0.27	0.53	-0.26	0.07	-3.92**
	After matching	0.27	0.46	-0.19	0.08	-2.42**
CPP in 6 months	Before matching	0.29	0.53	-0.24	0.07	-3.62**
	After matching	0.29	0.46	-0.17	0.08	-2.19**
Victim of **any** crime within 6 months	Before matching	0.19	0.15	0.04	0.05	0.84
	After matching	0.19	0.17	0.02	0.06	0.43
Suspect of **any** crime within 6 months	Before matching	0.07	0.08	-0.01	0.04	-0.25
	After matching	0.07	0.10	-0.03	0.04	-0.60

Variable	Sample	Intervention	Control	Difference	SE	t-stats
Reported as a missing person within 6 months	Before matching	0.02	0.03	-0.02	0.02	-0.75
	After matching	0.02	0.03	-0.01	0.03	-0.47

* Statistically significant (at least 10% level)

** Statistically significant (at least 5% level)

There was a significant drop for the intervention group in the use of Outcome 20, increase in the use of CR, and a reduction in the CPP referrals within three and six months' follow-up. However, becoming a victim again of any crime, becoming a suspect of any crime or being reported as a missing person within six months show no significant changes. Sample size is a limitation of this part of the analysis.

Female-only sample

In total, 181 victims of neglect (46%) in our data set were identified as females. Using the same method of matching, we obtained the average intervention effect for the female-only sample. See Appendix A2 for descriptive statistics of matched and unmatched samples, including covariates used for matching.

Table 15: Propensity score matching: average intervention effect (female victims only)

Variable	Sample	Intervention	Control	Difference	SE	t-stats
Outcome 20	Before matching	0.01	0.42	-0.41	0.05	-7.52**
	After matching	0.01	0.47	-0.46	0.07	-6.21**
Community resolution (OOCD)	Before matching	0.08	0.00	0.08	0.03	2.68**
	After matching	0.08	0.00	0.08	0.03	2.75**
CPP in 3 months	Before matching	0.18	0.37	-0.19	0.07	-2.81**
	After matching	0.19	0.37	-0.18	0.08	-2.16**
CPP in 6 months	Before matching	0.21	0.37	-0.17	0.07	-2.42**
	After matching	0.22	0.37	-0.15	0.08	-1.84**
Victim of **any** crime within 6 months	Before matching	0.16	0.14	0.01	0.06	0.29
	After matching	0.17	0.10	0.06	0.07	0.98
Suspect of **any** crime within 6 months	Before matching	0.02	0.08	-0.06	0.03	-1.79*
	After matching	0.02	0.09	-0.07	0.05	-1.41

Variable	Sample	Intervention	Control	Difference	SE	t-stats
Reported as a missing person within 6 months	Before matching	0.02	0.05	-0.03	0.03	-0.89
	After matching	0.02	0.07	-0.05	0.04	-1.23

* Statistically significant (at least 10% level)

** Statistically significant (at least 5% level)

There is a significant drop for the intervention group in the use of Outcome 20, an increase in the use of CR and a reduction in the CPP referrals within three and six months' follow-up. However, becoming a victim again of any crime, becoming a suspect of any crime or being reported as a missing person within six months show no significant changes. Sample size is again a limitation of this part of the analysis.

Sub-group analysis by age

The average age of a victim of neglect and cruelty was 6.4 years (median 6 years), so we created two age groups: 'younger victims' of those aged below 7 years, and 'older victims' of those aged 7 to 16 years. We report our findings below.

'Younger victims' sample (ages below 7 years)

Overall, 209 of 394 children in our sample (53%) were classified as 'younger victims' and were aged younger than 7 years. Using the same method of matching, average intervention effects for the younger-victims-only sample were obtained. See Appendix A3 for descriptive statistics of matched and unmatched samples, including covariates for matching.

Table 16: Propensity score matching: average intervention effect (younger victims only)

Variable	Sample	Intervention	Control	Difference	SE	t-stats
Outcome 20	Before matching	0.00	0.46	-0.46	0.05	-9.30**
	After matching	0.00	0.37	-0.37	0.12	-3.18**
Community resolution (OOCD)	Before matching	0.13	0.00	0.13	0.03	3.77**
	After matching	0.13	0.00	0.13	0.03	3.85**
CPP in 3 months	Before matching	0.24	0.47	-0.23	0.07	-3.57**
	After matching	0.24	0.36	-0.12	0.12	-1.02
CPP in 6 months	Before matching	0.24	0.47	-0.23	0.07	-3.57**
	After matching	0.24	0.36	-0.12	0.12	-1.02
Victim of **any** crime within 6 months	Before matching	0.10	0.14	-0.05	0.05	-0.97
	After matching	0.10	0.20	-0.10	0.09	-1.12
Suspect of **any** crime within 6 months	Before matching	0.02	0.04	-0.02	0.02	-0.88
	After matching	0.02	0.06	-0.04	0.04	-0.87

Variable	Sample	Intervention	Control	Difference	SE	t-stats
Reported as a missing person within 6 months	Before matching	0.00	0.03	-0.03	0.02	-1.79*
	After matching	0.00	0.06	-0.06	0.04	-1.42

* Statistically significant (at least 10% level)

** Statistically significant (at least 5% level)

There was a significant drop in the intervention group in the use of Outcome 20 and increase in the use of CR. However, reduction in the CPP referrals within three and six months' follow-up was not significant after matching. Becoming a victim again of any crime, becoming a suspect of any crime or being reported as a missing person within six months show no significant changes after matching. Sample size is a limitation of this part of the analysis.

'Older victims' sample (ages 7 to 16 years)

In total, 185 victims in our sample (47%) were classified as 'older victims' and were aged 7 to 16 years. Using the same method of matching, we obtained the average intervention effect for the older-victims-only sample. A table with descriptive statistics of matched and unmatched samples, including the list of covariates used for matching, is available in Appendix A4.

Table 17: Propensity score matching: average intervention effect (older victims only)

Variable	Sample	Intervention	Control	Difference	SE	t-stats
Outcome 20	Before matching	0.01	0.46	-0.45	0.05	-8.73**
	After matching	0.01	0.49	-0.48	0.09	-5.07**
Community resolution (OOCD)	Before matching	0.09	0.00	0.09	0.03	2.69**
	After matching	0.09	0.00	0.09	0.03	3.13**
CPP in 3 months	Before matching	0.23	0.43	-0.20	0.07	-2.89**
	After matching	0.23	0.35	-0.12	0.10	-1.27
CPP in 6 months	Before matching	0.27	0.43	-0.16	0.07	-2.26**
	After matching	0.27	0.35	-0.08	0.10	-0.85
Victim of **any** crime within 6 months	Before matching	0.26	0.15	-0.11	0.06	1.78
	After matching	0.26	0.16	-0.10	0.08	1.27
Suspect of **any** crime within 6 months	Before matching	0.08	0.14	-0.06	0.05	-1.18
	After matching	0.08	0.25	-0.17	0.08	-2.23**

Variable	Sample	Intervention	Control	Difference	SE	t-stats
Reported as a missing person within 6 months	Before matching	0.04	0.05	-0.01	0.03	-0.44
	After matching	0.04	0.13	-0.09	0.06	-1.57

* Statistically significant (at least 10% level)

** Statistically significant (at least 5% level)

There was a significant drop in the intervention group in the use of Outcome 20 and increase in the use of CR. However, reduction in the CPP referrals within three and six months' follow-up was not significant after matching. Becoming a victim again of any crime and being reported as a missing person within six months showed no significant changes after matching. However, for older victims, there was a significant reduction of 17 percentage points in becoming a suspect after the intervention. Sample size is again a limitation of this part of the analysis.

Overall, the results are similar across age groups. The main difference is that in the younger age group, the reduction in the intervention group of becoming a suspect is insignificant. This is likely driven by the fact that very few in the younger age group become the suspect of a crime.

Conclusion

This report presented further analysis of outcome data for an intervention in place within Hampshire regarding child neglect. It finds, in relation to longer-term victimisation or involvement in crime, that children in families who had been engaged in FSPs were no more or less likely to become a victim of crime than those in the control population. However, they were slightly less likely to be suspected of criminal or anti-social behaviour, or to be reported as a missing person. These events were found to be significantly correlated with each other. Children who were not suspected of criminal behaviour were less likely to be victims and vice versa.

Being on a CPP in the past three years was found to be positively and significantly correlated with becoming a victim of any crime again and a suspect of any crime within six months. This correlation may indicate the underlying vulnerability of the children or their being better monitored, rather than a causal link, and this needs further analysis. Furthermore, when the use of CR went up after the intervention was introduced in 2019, the victimisation rate (of any crime) was 10 percentage points lower for those victims of neglect where CR was issued as a police outcome, even if the difference was not statistically significant. This might indicate less monitoring for those treated with a CR but might also indicate a beneficial impact of CR. Once again, we think this merits further analysis to see if the decriminalising impact of CR actually reduces victimisation.

These results do not change substantially in a sub-group analysis undertaken by age and gender. The reduction in becoming a suspect of any crime remains significant for older children (ages 7 and above) for the intervention group, in line with the results of the whole sample. Overall, these results are promising, as we can see a significant reduction in some of the main outcome variables reported. However, longer follow-up and a larger sample is needed to analyse whether these effects are sustained.

Appendix: Victim and suspect analysis by gender and age

A1. Male victims only

Due to a smaller sample size (n = 212) the intervention and control groups were matched on the following covariates only:

- age of the child

- whether the child was on the CPP in the past three years

- drugs marker

- physical assault marker

- mental health marker

Table A1. Descriptive statistics of matched and unmatched samples

		Mean			t-test	
	Unmatched or matched	Treated	Control	% bias	t	p>|t|
Physical assault	Unmatched	0.23	0.18	11.4	0.80	0.42
	Matched	0.23	0.21	3.6	0.23	0.79
Age (victim)	Unmatched	6.13	5.44	16.7	1.18	0.24
	Matched	6.13	5.98	3.6	0.28	0.78
CPP in past 3 years	Unmatched	0.30	0.17	30.4	2.11	0.04
	Matched	0.30	0.30	0.70	0.05	0.96
Mental health marker	Unmatched	0.04	0.02	7.3	0.51	0.61
	Matched	0.04	0.04	-1.7	-0.12	0.91

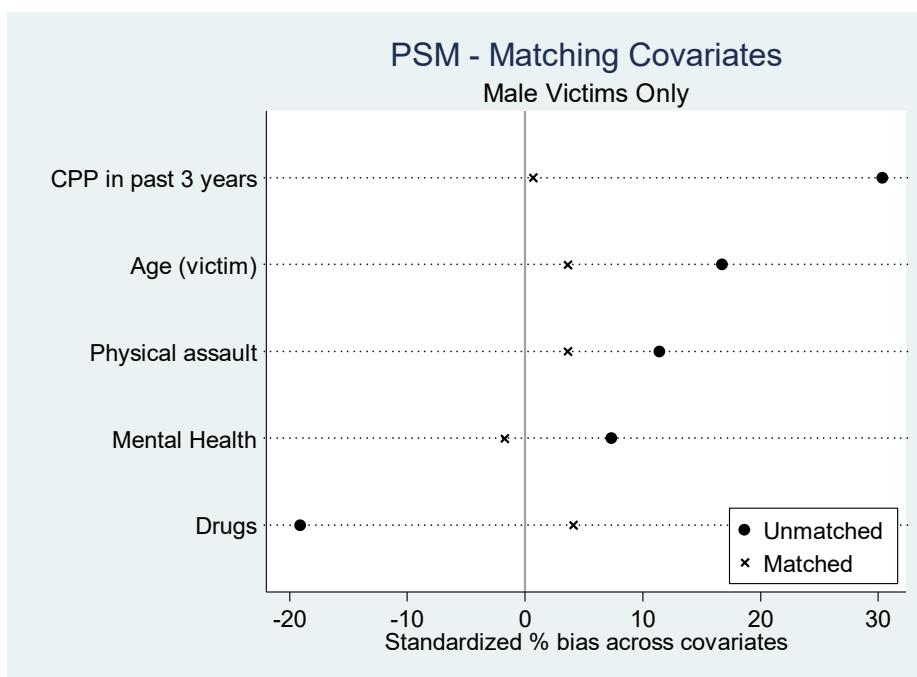|		Mean			t-test	
	Unmatched or matched	Treated	Control	% bias	t	p>|t|
Drugs	Unmatched	0.11	0.18	-19.1	-1.36	0.18
	Matched	0.11	0.10	4.1	0.36	0.72

Figure A1. Propensity score matching – matching covariates illustration (male victims only)

A2. Female victims only

Due to a smaller sample size (n = 181), the intervention and control groups were matched on the following covariates only:

- age of the child

- whether the child was on the CPP in the past three years

- drugs marker

- physical assault marker

- mental health marker

Table A2. Descriptive statistics of matched and unmatched samples

|		Mean			t-test	
	Unmatched or matched	Treated	Control	% bias	t	p>|t|
Physical assault	Unmatched	0.27	0.13	38.5	2.50	0.01
	Matched	0.25	0.25	2.0	0.12	0.91
Age (victim)	Unmatched	7.10	7.17	-1.4	-0.09	0.93
	Matched	7.37	7.33	0.9	0.05	0.96
CPP in past 3 years	Unmatched	0.20	0.31	-27.2	-1.77	0.08
	Matched	0.20	0.20	1.9	0.13	0.90
Mental health marker	Unmatched	0.03	0.04	-0.9	-0.06	0.95
	Matched	0.04	0.03	4.3	0.29	0.77
Drugs	Unmatched	0.10	0.11	-1.6	-0.10	0.92
	Matched	0.11	0.08	9.1	0.62	0.54
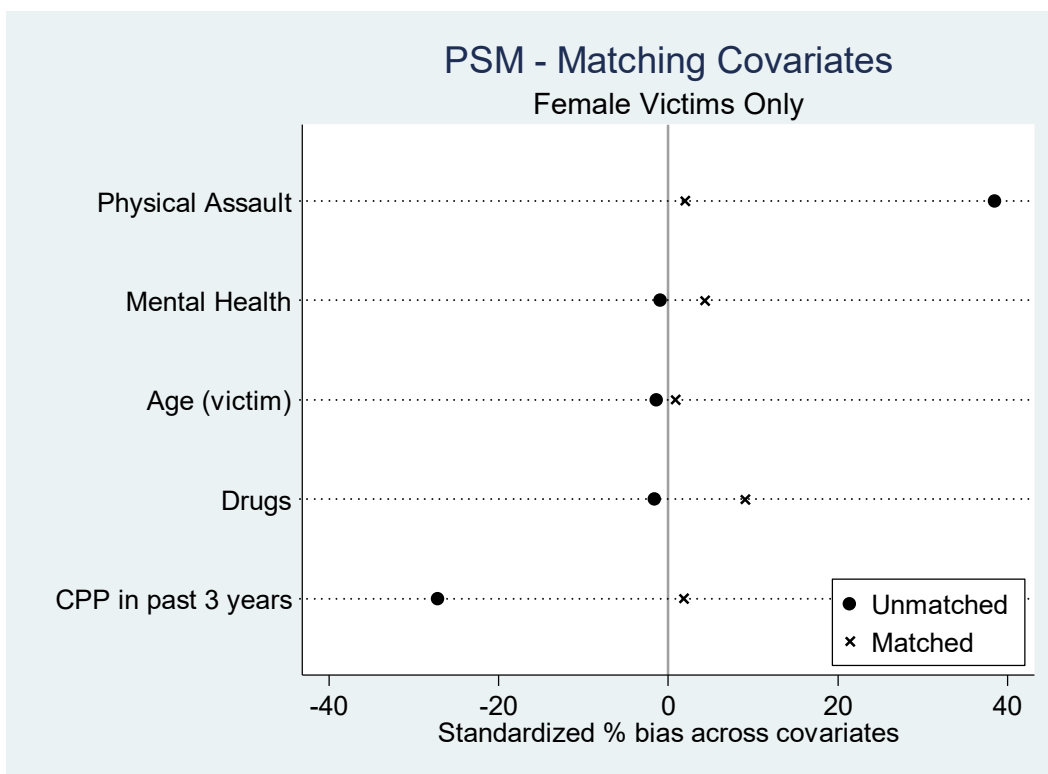
Figure A2. Propensity score matching – matching covariates illustration (female victims only)

A3. Younger victims only

Due to a smaller sample size (n = 209), the intervention and control groups were matched on the following covariates only:

- gender of the child

- living conditions marker

- drugs marker

- physical assault marker

- related to domestic violence (DV)

Table A3. Descriptive statistics of matched and unmatched samples

|		Mean			t-test	
	Unmatched or matched	Treated	Control	% bias	t	p>|t|
Gender	Unmatched	1.61	1.58	7.4	0.52	0.60
	Matched	1.62	1.64	-4.1	-0.29	0.77
Living conditions	Unmatched	0.31	0.42	-24.1	-1.70	0.10
	Matched	0.30	0.29	1.4	0.10	0.92
Drugs	Unmatched	0.13	0.18	-12.9	1.38	0.17
	Matched	0.13	0.11	6.5	0.51	0.61
Physical assault	Unmatched	0.21	0.13	19.6	1.38	0.17
	Matched	0.21	0.18	8.0	0.53	0.60
DV-related	Unmatched	0.04	0.05	-5.7	-0.40	0.69
	Matched	0.03	0.03	0.0	-0.00	1.00
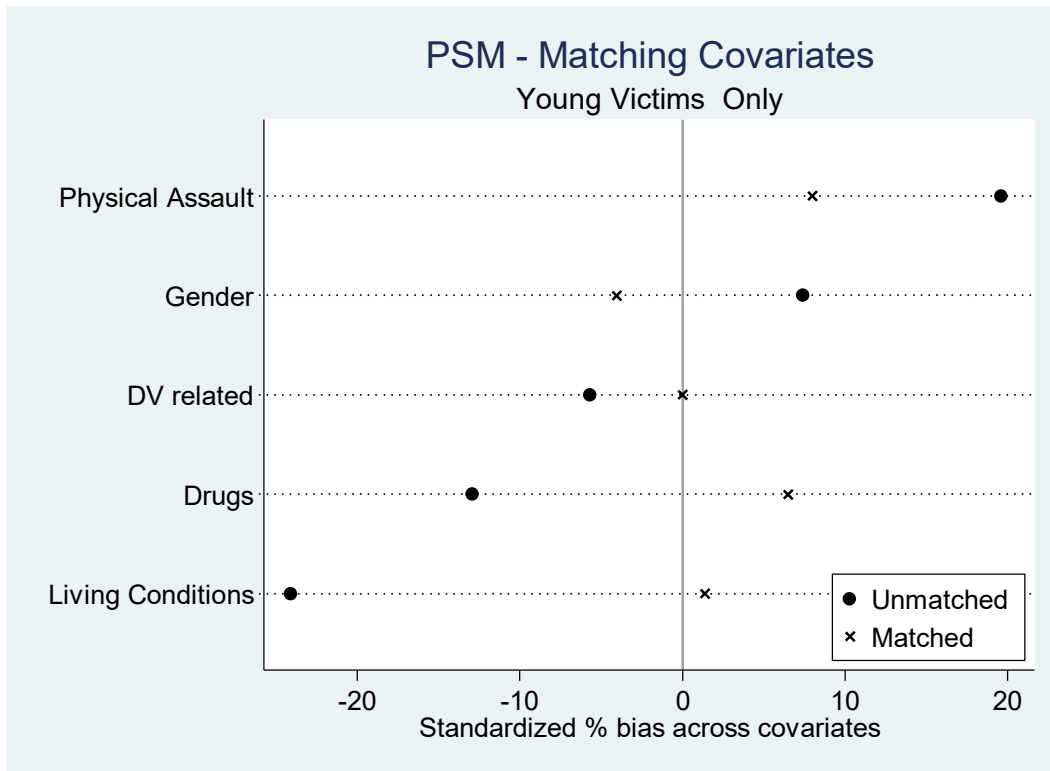
Figure A3. Propensity score matching – matching covariates illustration (younger victims only)

A4. Older victims only

Due to a smaller sample size (n = 185), the intervention and control groups were matched on the following covariates only:

- gender of the child

- living conditions marker

- drugs marker

- physical assault marker

- DV-related

Table A4. Descriptive statistics of matched and unmatched samples

|		Mean			t-test	
	Unmatched or matched	Treated	Control	% bias	t	p>|t|
Gender	Unmatched	1.52	1.43	17.5	1.14	0.26
	Matched	1.52	1.52	-0.0	0.00	1.00
Living conditions	Unmatched	0.39	0.31	16.6	1.08	0.28
	Matched	0.39	0.40	-2.1	-0.14	0.87
Drugs	Unmatched	0.09	0.11	-6.0	-0.40	0.69
	Matched	0.09	0.06	8.9	0.71	0.48
Physical assault	Unmatched	0.30	0.19	25.8	1.67	0.10
	Matched	0.30	0.27	6.2	0.42	0.68
Multiple suspects	Unmatched	0.27	0.28	-3.1	-0.20	0.84
	Matched	0.27	0.26	3.0	0.21	0.83
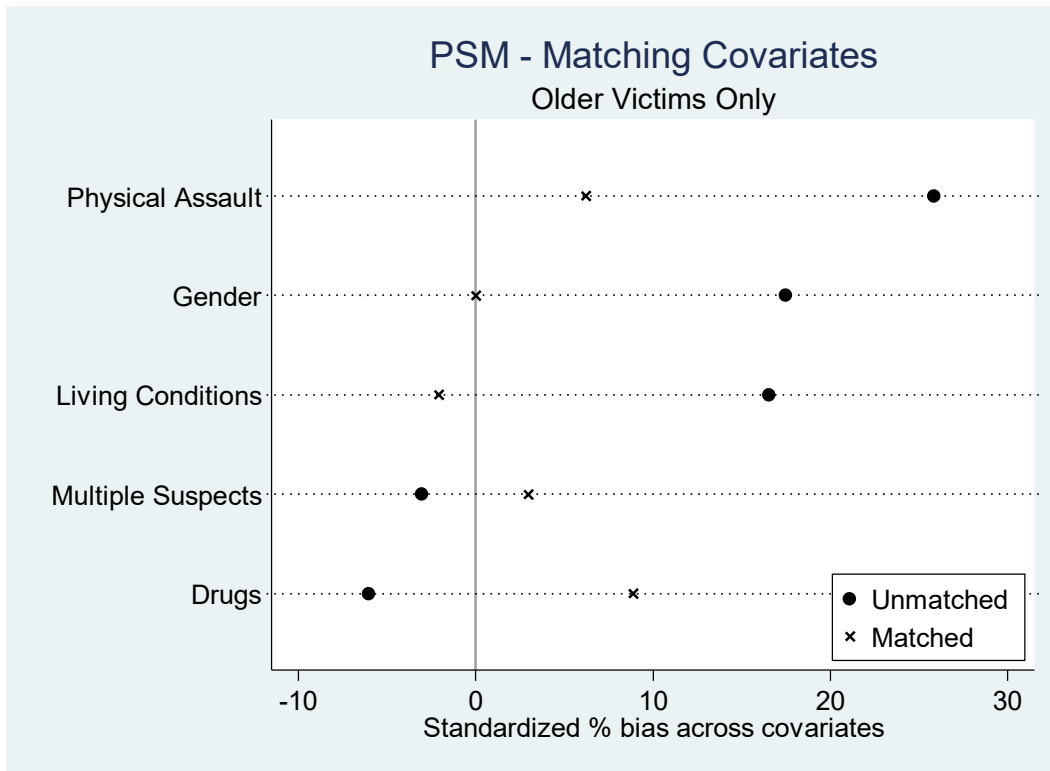
Figure A4. Propensity score matching – matching covariates illustration (older victims only)

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