The **Human Rights, Big Data** and **Technology** Project

Policy Briefing

On the Escalation of Domestic Violence

during the

Covid-19 Related Lockdown

by

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Domestic violence exhibits a global surge since the onset of Covid-19

Social distancing in the wake of the global Covid-19 pandemic has led to millions of families the world over being "locked down" together in their homes and to widespread job and income losses. This has coincided with a substantial global surge in domestic violence, which the UN has described as a shadow pandemic. This is a serious concern given that both social distancing and recessionary conditions are likely to continue for some time, even if intermittently.

Early data for the UK illustrate the scale of the problem. In the first month following initiation of lockdown on 23 March, calls to domestic violence helplines more than doubled, traffic on their websites trebled, and 13 women are believed to have been killed by men at home. This homicide rate is well in excess of the already mind-bending average of two women a week, and the highest rate in the last 11 years (Guardian, 22 April 2020). A helpline for perpetrators seeking help to change their behaviour received 25% more calls after the start of lockdown (The Guardian, 12 April). At the same time, 80% of women's frontline support services reported a reduced service because of reduced face-to-face contact, staff sickness and technical issues, including a shortage of laptops to enable working from home. (Guardian, 22 April 2020). The UK is by no means alone. Increases in domestic violence since lockdown have been reported for numerous other countries (UN Women 2020).[1]

The fact that a similar pattern has been observed across the world must reveal something about the underlying causes of domestic violence. Is it the result of income or other stress associated with unemployment, or has an escalation of conflict resulted directly from couples spending more time together? In this piece, I describe recent research using data from Brazil that pre-date the Covid pandemic but that may nevertheless shed light on the causes of and potential solutions to the current global spike in domestic violence (Bhalotra et al. 2020).[2]

Research using Brazilian administrative data -hypotheses and data

Our research was designed to investigate the specific question of how unemployment influences domestic violence. We analyse impacts of male job loss on perpetration of violence and impacts of female job loss on victimization. We then investigate whether unemployment benefits mitigate any impacts of unemployment on domestic violence. We will find that, by virtue of estimating these three relationships on the same data, we are able to illuminate the underlying mechanisms.

Job loss of one or the other partner can influence domestic violence through the following mechanisms. First, it can modify options outside marriage, leading to either partner approaching cooperation in the

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[1] Reports have emerged, inter alia, from China, Italy, Spain, France, Germany, Denmark, Cyprus, the United States, Canada, South Africa, Australia, Singapore, India, Argentina and Colombia (New York Times, 6 April 2020; France24, 6 April 2020; WHO, 7 April 2020; The Hindu, 2 April 2020; UN Women, 2020; CNN, 4 April 2020). The Director of WHO's European region noted that, across the continent, the number of women making emergency calls had risen 60 per cent in April, compared to the same month in 2019 (The Telegraph, 7 May 2020).

[2] Although there are reports of an increase in cases where the woman is the perpetrator, we focus on the larger set of cases where the man is the perpetrator. I am not aware of any data indicating whether or not there has been an increase in cases among homosexual couples.

partnership differently. Second, it can challenge gender stereotypes by changing the relative earnings of the man and woman. Third, it will tend to lead to the couple spending more time together, increasing opportunities for violence. Fourth, job loss tends to lead to psychological stress which may, in turn, lead to substance use or difficult negotiations, lowering the bar for conflict. Stress may be generated by income constraints, uncertainty about future income, or a sense of failure. Our research attempts to illuminate the relative importance of these channels.

We gained access to court registers for Brazil that contain every domestic violence case during 2009-2017. There were 2 million cases in this period, representing 11% of all criminal justice cases. While not all domestic violence cases go to court, Brazil has implemented policies that make it easier for women to report violence and for police reports to escalate to the judicial system for resolution.

We linked individuals involved in domestic violence cases to administrative data containing longitudinal employment records for every individual in Brazil through 2009-2017. These data also provide earnings, occupation, age, education and tenure, and allow us to identify the firm that the individual is employed in. Using the linked data, we set out to test whether unemployment shocks lead to domestic violence cases. These are "*big data*", containing 100 million workers, over 60 million employment spells and 10 million layoffs per year.

A simple description of the association between unemployment and domestic violence could be misleading. It may be that men who perpetrate violence against their partners are men with behaviours that make them prone to job loss. This is not what we want to capture. What we want to understand is how unexpected job loss, that has nothing to do with the behaviours of men, influences their propensity to commit violence. And similarly, we want to understand whether women who lose their jobs through no fault of their own are more likely to be victimized. This is what is most relevant to public policy, as it could help us understand how events outside the control of individuals such as recessions or social distancing mandates might impact domestic violence through generating unemployment. To isolate impacts of unwarranted job loss, we study individuals who lose their jobs in mass layoffs or plant closures. We compare their behaviour with that of men who are similar in many other relevant attributes, including tenure and income, but who do not lose their jobs.

Main finding- Job loss of both men and women leads to higher domestic violence

We find that job loss of men and women leads to a significant increase in domestic violence. Male job loss results in a roughly 30 percent increase in the chances that a man perpetrates violence and female job loss delivers a roughly 60 percent increase in the chances that a woman is victimized. In both cases, the effects persist through the three years for which we are able to track individuals following job loss. These results hold for most types of workers - across most of the distribution of age, education and income. We show that the same pattern of results emerges when we use data from social welfare registers in which we can identify couples. We also find that the same pattern when, instead of using judicial data, we use data on women's use of public shelters as a measure of domestic violence. We next discuss the mechanisms or behavioural causes underlying these results, which is relevant to devising potential solutions.

Behavioural models of domestic violence- do changes in relative earnings matter?

The fact that job loss experienced by men and women in Brazil moves domestic violence in the *same* direction (upwards) calls into question the relevance of a workhorse model that economists have used to illuminate decision making between couples. Labelled the bargaining model, it predicts that the power balance within a couple is influenced by their 'outside options'. So, if the man becomes unemployed, his outside options deteriorate, and the model predicts that he will be tamed into less violent behaviour. Similarly, if the woman is unemployed, the model predicts that she will be more likely to tolerate violence (and not report it) than if she could walk away with self-sufficiency from the partnership. To sum up, this model of behaviour predicts that male and female unemployment will have *opposite* impacts on domestic violence (Anderberg et al. 2016, Aizer 2010).

An alternative (sociological) model of domestic violence that emphasises male backlash (Macmillan & Gartner 1999) reverses the predictions of the economic model. It posits that in societies where male identity is closely tied to a breadwinner norm, an improvement in female job opportunities may prime male identity, leading men to sabotage the economic activity of their partners. In line with this, there is some evidence that policy interventions designed to create financial independence for women through skills training, jobs, credit or cash transfers have perversely increased actual or threatened domestic violence (Angelucci 2008, Heath 2014, Bhalotra et al. 2019, Tur-Prats 2019, Estefan 2019, Kotsadam, and Villanger 2020, Carr and Packham forthcoming). The upshot is that female job loss may lower domestic violence, while the stress from male job loss will tend to increase it. Thus, male and female job loss again have opposing effects on domestic violence.

Our finding that male and female job loss *both* lead to higher domestic violence indicates that neither the bargaining nor the backlash model can explain behaviour in Brazil. We will explain now that they can be explained instead by the fact that unemployment leads to (a) the couple spending more time together and (b) income shortfalls.

The role of time spent together- the home is not a safe haven for us all

The exposure model in criminology posits that domestic violence will tend to increase when couples spend longer together (Dugan Nagin & and Rosenfeld 1999). This is in line with evidence that domestic violence escalates during national holidays, weekends and nights (Vazquez et al. 2005) and during periods of bad weather (RAINN in the United States) as, in both cases, people spend more time at home. It reconciles our findings that both male and female unemployment increase the chance of domestic violence increases because the couple spend more time together.

It also coincides with recent media coverage of the Covid-19 surge, for instance, "It is thought that [domestic violence] cases have increased by 20% during the lockdown, as many people are trapped at home with their abuser." (BBC News 13 June). The State Undersecretary for Public Policies for Women in Brazil, Luciana Azambuja recently wrote: "Social isolation will make families spend more time together. This can generate more conflicts, which can result in situations of domestic violence or aggravate aggressions that were already happening in this environment. The care and protection network for women will not stop and it is important that the victim knows that, even in quarantine, she can seek help." The

Brazilian newspaper Estadão wrote the following, quoting a female victim: "When I was out of work and we had to spend the whole day together, humiliation by mouth started to be more frequent, but I remained quiet." Last month, verbal aggression turned into physical aggression. During an evening discussion, Maria, screaming, asked for help from the neighbours who called the police. With bruises, she was referred to the hospital and police station and asked for protective measures against the aggressor (see https://outline.com/fXpzUv).

Studies of domestic violence in the Covid-19 era are just emerging, for example, Leslie and Wilson (2020) show that the pandemic has led to a 10.2 percent increase in domestic violence calls in 15 large American cities relative to calls in the same season in preceding years. Although they do not analyse job loss or income, in line with the exposure hypothesis, they show that the timing of the increase coincides with people spending more time at home -as evident from GPS tracking of mobile phones and data on seated restaurant customers- which preceded official lockdown. Although, in general, domestic violence tends to spike on weekends, the *pandemic related* increases are most evident on weekdays, consistent with individuals being at home who otherwise (in previous years) would have been at work.

In addition to lockdown forcing couples to be together for longer, lockdown has limited contact with extended family and friends, and research shows that domestic violence tends to rise when the potential victim is more isolated from her social network (Gelles 1983, 1993, Usher et al 2020). Etheridge and Spantig (2020) demonstrate a deterioration in mental health in the UK that is larger among women and show that the decline in social interactions is the most important factor driving this.

A role for exposure or opportunity has been identified in other contexts. For instance, a literature on crime discusses incarceration as effective in reducing future crime on account of incapacitation, as distinct from deterrence (Buonanno and Raphael 2013). Similarly, research shows that increasing time spent in school, by curtailing opportunities to engage in risky behaviors, leads to lower rates of teenage pregnancy and juvenile crime (Berthelon and Kruger 2011). In our setting, employment has an incapacitation effect on domestic violence, and unemployment undoes that.

The role of income constraints- Do unemployment benefits or severance payments help?

The bargaining and backlash models are focused on the manner in which the *relative earnings* of the woman (relative to the man) determine power in the relationship. We found no clear evidence that job loss influences domestic violence in Brazil through changing the earnings shares of the couple. What we want to investigate now is whether the absolute drop in earnings associated with unemployment contributes to perpetration of domestic violence.

Previous research shows that (male) job loss generates psychological stress (Kuhn, Lalive, and Zweimüller, 2009, Sullivan and von Wachter 2009, Charles and DeCicca 2008). Research on the Covid-19 pandemic in the UK indicates that mental health has deteriorated during the current pandemic and Banks and Xu (2020) note that this deterioration is higher among those who have suffered job loss. Couples may need to re-negotiate how their more limited resources are spent, see for instance Card and Dahl (2011) who suggest expressive motives for IPV. What is less understood is the degree to which the stress following job loss is income-related, and whether benefits help.

Identifying the role of income shortfalls is challenging because unemployment is synonymous with a drop in income *and* an increase in time at home, and we only ever observe the joint effect of these two changes. However, if we take a sample of unemployed men (all of whom spend time at home) and some of them receive benefits and some of them do not then, in principle, we can isolate the role of income constraints.

Initially, we leverage the fact that both unemployment benefits and severance payments in Brazil are increasing in tenure. We examine if the impact of male job loss on domestic violence varies with the tenure of workers at the time of displacement. We find a stark gradient, showing that it is only workers with less than three years tenure that commit IPV following job loss. However, low tenure workers differ along other dimensions- for example, they tend to have lower incomes and be younger. To address this, we use statistical methods that comprehensively purge the tenure gradient of impacts associated with differences in age, education, income, race, state and industry so that the only *observable* difference between high and low tenure workers is in receipt of welfare payments. The tenure gradient therefore shows that income constraints are a driver of domestic violence. This is important as it suggests that providing severance payments and unemployment benefits to displaced workers could significantly mitigate the impact of unemployment on domestic violence.

To investigate this further, we exploit experimental variation generated by unemployment insurance eligibility rules. Workers who have previously received benefits in Brazil need to have at least a 16 month gap before they can claim benefits again, see Gerard et al. (2019). This means that workers with a 15 month gap are ineligible while workers with a 17 month gap are eligible and, by construction, these individuals are otherwise very similar. We can test this and use it to minimize the play of unobservables (like conscientiousness) by comparing men who are just eligible with men who are just ineligible for unemployment benefits in a regression discontinuity design.[3] Unemployment benefits in Brazil cover, on average, about 80% of former earnings and last 3 to 5 months.

We find that eligibility for unemployment benefits fails to mitigate impacts of job loss on domestic violence. In the months that benefits are being received, they have no impact on the probability that job loss triggers domestic violence. What is worse, once they stop receiving benefits men who were eligible to receive benefits are more likely (than ineligible men) to commit domestic violence. How do we explain this? The answer lies in a large literature in economics which shows, using data for different countries, that unemployment insurance leads to longer unemployment durations (e.g. Katz and Meyer 1990, Lalive 2008).[4] We confirm that this is also true in our data from Brazil: men who just crossed the eligibility threshold for benefits are unemployed for longer than men who were just short of the eligibility threshold. That longer durations of unemployment lead to higher domestic violence is exactly the prediction of the exposure model which, earlier, we leaned upon as a possible explanation of our main finding, that male and female job loss both tend to raise the chances of domestic violence.

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[3] We did the same analysis for job loss among women- the results suggest that unemployment benefits have no impact on their suffering domestic violence, either during benefit receipt, or after. However these estimates are imprecise so we do not analyse them further.

[4] The casual chain here is that receipt of benefits leads to longer unemployment durations (after the benefits cease), more time at home, and hence more opportunities to commit domestic violence. It is important to recapitulate that the comparison here is with men who lose their jobs and do not qualify for benefits, rather than with those who remain employed.

So, although we have a fine natural experiment created by eligibility rules, we are not able to isolate the role of income constraints. This is because unemployment benefits have behavioural effects that re-introduce the relevance of time spent at home.

What we can say is that our results are entirely consistent with income shortfalls being a determinant of domestic violence. In the first trimester, when eligible men are receiving benefits, the violence-increasing effects of more time spent at home appear to be offset by receipt of cash. When the benefits expire, exposure effects dominate, and violence emerges. One might have expected that individuals receiving benefits would save so as to smooth their consumption through any slack between expiry of benefits and the finding of a new job. However, there is no evidence of this- Gerard & Naritomi (2020) show a sharp drop in consumption of Brazilian workers after unemployment benefits expire, and this is also the case in the United States (Ganong and Noel 2019). In fact, this appears to be a more general behavioural pattern (Aguiar et al. 2019). There is limited evidence that benefits alleviate the stress associated with job loss. Instead, there is some evidence that longer durations of unemployment insurance cover among men (but not women) are associated with antidepressant prescriptions and cardiac events (Ahammer et al 2020), indicative of elevated stress.[5]

What then is the upshot for policy? Our main conclusions are that job loss influences domestic violence through generating (a) an income shortfall and (b) exposure or more time spent together. So, the ideal policy intervention would compensate the income shortfall and get people out of the home and back to work. Unemployment benefits can help but they need to be combined with active policies aimed at getting the unemployed back to work (training, support with job search). While severance payments also have behavioural effects (Card et al. 2007, Basten et al.2014), these tend to be smaller. In principle, welfare payments could be made conditional upon not committing domestic violence. This may be hard to monitor, but the conditionality may nevertheless deter violence. Experiments conducted in Kenya (Haushofer et al. 2019) and Mali (Heath, Hidrobo and Roy 2020) show that cash transfers to men (and women in the Kenya study) lead to lower rates of physical violence, highlighting the potential for welfare payments to act if incentive effects can be avoided by design.

Addressing reporting bias

It is important before we conclude to recognize that a common problem with analysing data on reported acts of violence is that it can be very difficult to disentangle changes in the actual incidence of violence from changes in reporting behaviour. In particular, women may be more likely to report violence when the man has lost his job, and less likely to report it when they themselves lose their jobs, for instance because they are financially reliant on their husbands. This raises the concern that our estimates of the relationship between job loss and IPV may be spuriously driven by the way that unemployment affects reporting. We tackle this in multiple ways.

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[5] In households where the man is the primary earner, in addition to stress arising from liquidity constraints, male job loss may lead men to suffer a sense of their failure to provide. To the extent that women have weaker earnings potential, they may be more willing to tolerate violence.

First, we note that if male and female job loss influence reporting in the hypothesised direction, then we would expect to see an increase in reported violence following male job loss, but a decrease in reported violence following female job loss. Since in fact we find an increase in reported violence (and an increase in use of public shelters) following male *and* female job loss, it seems unlikely that our results are driven by reporting. However, it does remain possible that the results for male job loss are driven by changes in reporting.

We therefore conduct further checks for male job loss. We conjecture that women only report domestic violence when it is above a given tolerance level. So less severe cases get reported when that threshold shifts to the left and it seems plausible that this happens when the man loses his job. We leverage the richness of the court data to classify cases by severity of the charge in two ways- first by type of violence (e.g. physical battery and assault may be deemed more severe than threats of violence) and, second, by maximum jail sentence associated with the charge. If changes in reporting rather than changes in actual violence were driving our results, we would see a stronger relationship between job loss and domestic violence for less severe cases. But we find the opposite. Next, we conjecture that older women who are more likely to be in a long-term relationship and have children with the perpetrator are more likely to under-report IPV to protect their families. If this is right and if reporting behaviour drives our results, we would expect to find larger impacts of male job loss on reported violence among older women. What we find is that a statistically significant relationship holds in every age group and is in fact largest for the youngest women, age 20-24.

While these tests pulled together undermine the concern that changes in reporting drive our results, the most conclusive way to avoid conflation by reporting choices is to study cases where that choice is stripped out (of the equation). This is so for in flagrante cases which, as discussed earlier, are cases in which the perpetrator is "caught in action". We find that male job loss has an even stronger impact on IPV when we restrict the sample to these cases.

Summary of results from research on Brazil and implications for the Covid-19 surge in domestic violence

To sum up, our research for Brazil shows that domestic violence tends to increase when either men or women suffer job loss and that unemployment benefits do not address this problem. Investigating the underlying mechanisms, we find evidence consistent with income shortfalls and time spent together being drivers of the increase in violence. As the Covid-19 pandemic has led to job loss for men and women, to many families suffering a drop in income, and to most families spending more time together at home, our research potentially illuminates the surge in domestic violence that has recently occurred. It suggests that welfare payments are likely to mitigate impacts of Covid-19 on domestic violence as long as they encourage a return to work. Initiatives such as recently announced in the UK, that increase the number of "work coaches" to help the unemployed into new roles are likely to be key. Furlough schemes clearly help the liquidity problem and may have weaker effects on unemployment spells, but this remains to be seen. Having said all this, we caution against generalization as the studies cited earlier suggest that the mechanisms driving domestic violence may vary across countries.

Further remarks on policy design

Recent estimates emerging from a major multi-country study revealed that, on average, one in three women report having experienced intimate partner violence at some point in their lives (Garcia-Moreno, et al. 2006), so the recent surge is on a massive baseline rate. The focus of our research has been on intimate partner violence, but there are potential implications for child abuse. This is because they often go together, having a common perpetrator. Data available for the United States indicate that about a fourth of all children subject to maltreatment at home in 2015 lived in households with reports of physical intimate partner violence (U.S. Department of Health and Human Services, 2017). This strengthens the case for policy interventions.

This is a domain where policy design needs first to identify what instruments are likely to work- among income transfers, shelters, counselling, training programmes for perpetrators, skills training and job opportunities for women, prohibition orders, or some combination of these. Our research makes an initial contribution in this direction. However, policy in this domain must not only identify causes but also be sensitive in designing solutions that can accommodate the privacy of the individuals involved, consider the children in the household, and the fact that some women victims may want redress but may not want their partners incarcerated or fined, while other women may seek ways to "escape".

Actual policy responses to the spike in domestic violence during the Covid-19 pandemic have taken the form of additional government funding, measures to encourage reporting, and measures that permit women to escape homes where they feel unsafe. For instance, in the UK and elsewhere, hotels have been asked to open their emptied rooms to women seeking refuge, and women who need to leave abusive partners are now allowed to travel on trains without purchasing a ticket. Measures to facilitate reporting include allowing women to use a code on their phones when it is not safe to speak, or to report abuse to pharmacies, post offices, grocery stores or other routine contact points. These are all useful, timely measures. However, going forward, more fundamental research is needed to understand how best to design preventive measures. This requires an understanding of human behaviour, and how people respond to incentives and constraints.

Acknowledgements

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