

# **The Impact of COVID-19 Lockdown on the Level of Violence against Women in Israel**

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## **Abstract**

To stop the spread of the epidemic of COVID19 in Israel, The Israeli government has chosen to adopt the "lockdown" policy. This policy tried to control the increase in the number of patients, but it brought with it many implications. Starting from the economic crisis that forced many businesses to close with huge debts and losses, ending with homes that have been turned into a "very dangerous place" for victims of domestic violence. While the government has given financial aid to the first damaged group, there was not enough attention has been given to what is happening inside the houses and between the family members especially between spouses.

Global surveys have found that one in three women in the world suffers sexual or physical violence, mostly from their partner<sup>1</sup>. Moreover, they indicate that violence against women often increases in times of emergencies and crises, including epidemics. The risk of women being exposed to violence can be increased due to psychological stress, the disintegration of social protection nets, the amount of time the couple spends together, and financial stress because of economic hardship.

In order to examine the relationship between the lockdown policy in Israel and the increase in the level of violence against women from their partners, we will use the multivariate linear regression model. This paper will help better understand this sensitive social problem, may encourage the decision-makers to invest more resources and efforts to reduce these phenomena in Israel, and may push health care systems to identify creative solutions to provide clinical care and forensic services for victims of violence against women.

## **Introduction**

Violence against women is one of the most widespread violations worldwide: It is considered a human rights violation that undermines women's role in society. It is an obstacle to the achievement of equality, development, and peace and significantly impairs the security, dignity, health, and independence of its victims, and usually tends to remain hidden by a culture of silence<sup>2</sup>.

Globally, reports of violence against women have been increased during the COVID-19 pandemic, new variables joined to this phenomenon and added challenges. This study will shed light on the battered women in Israel where thousands of women are defined within this group that recently has expanded in the Corona crisis lockdown.

In March 2020, Israel imposed many restrictions on the public including hand hygiene, use of facemasks, social distancing, and home lockdown. This closure led to enormous economic consequences, such as job losses, unemployment, declining incomes, and economic burden. Add to all of that, the invisible psychological damage that manifested in the increase in tensions in households, the level of anxiety, and depression.

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<sup>1</sup> 2003 UNIFEM report "Not a minute more: Ending Violence Against Women"

<sup>2</sup> United Nations, 1993 " Declaration on the Elimination of Violence against Women"

The "stay at home" policy was a protective instrument for the Israeli residents. However, "home" was not a safe place for some groups. The social isolation changed the daily routine of the people, restricted their movements, and disconnected them from the support sources like family, close friends, and professional centers. All of these variables might increase gender base violence and weakened women's ability to respond to their violent perpetrators.

Although now there is a vaccine for Corona and most of the citizens in Israel have been vaccinated, the pandemic will just slowly be considered insignificant. Its impact on our life will remain as a shadow in the next decade.

Despite many studies that have raised the issue of violence during the corona period, and they presented many factors that may influence it, the purpose of this paper is to lay out a plan to address the question: **has there been an increase in the level of violence against women in Israel by their partners under the impact of the lockdown policy?**

To examine the direct relationship between the increased level of violence against women in Israel and the different factors operating during the pandemic lockdown, a multivariate linear regression model will be used. In the perfect world, I would like to conduct this study by using the difference in differences model, but there are several restrictions that I will detail later. The data will be collected as a self-administered online questionnaire survey method; the sample will include approximately 500 women who are in a relationship frame; marriage or cohabitation. These women will be asked to respond to their personal experiences of spousal violence before and during the lockdown period.

In light of the primality testing the impact of COVID-19, I believe that this research will be among the first studies focusing on the implications of the lockdown treatment policy on the phenomenon of the VAW in Israel. According to the reports and the updates since the beginning of the pandemic, I am expecting to see an increase in the level of violence during the coronavirus period, especially during the first lockdown.

Unfortunately, the cumulative effect of the violence, under the disconnection from family and social circles and under the economic distress can cause serious consequences on the battered women both in the short term and in the long term. Conducting this research will emphasize recognizing and acknowledging the extent of the problem, raising awareness about it and the available resources to address it, and ensuring social and economic stability. This empirical research may be able to draw important conclusions and make better adjustments to determine a focused and effective policy that will help these women cope later, and addressing this problem could be valuable for similar future crises.

## Background

The framework of this research is based on many studies that examine the increase in the level of violence against women from their spouses during Corona lockdown. Several researchers have reported that women's requests for help because of partner violence extraordinarily increase after natural disasters such as hurricanes and earthquakes, and this increase lasts for a year<sup>3</sup>.

**Globally, the Australian Institute of Criminology** has published a study that indicates that the probability of repeat or first-time violence was between 1.3 and 1.4 times higher for women who had less contact with their families and friends during the pandemic of COVID-19<sup>4</sup>. **In India**, the domestic violence complaints increase 0.47 SD in districts with the strictest lockdown rules<sup>5</sup>. **In the Kurdistan Region of Iraq**, significant increases in violence were observed from the pre-lockdown period 32.1% to the lockdown period for any violence 38.7%. The study found that staying at home for women who live in such relationships increases the risk of spousal violence which can be attributed to the long spent time with the partner and close contact<sup>6</sup>. **In Lebanon**, according to Kafa NGO, female violence victims noted a 50% increase in the call for help, and six cases of mortality of abused female victims were recorded.<sup>7</sup>

**Locally**, in 2020, 70% of Israeli women had to stop working and stay at home during corona lockdowns. Moreover, the average number of monthly domestic violence reports has increased to 699 complaints which are almost double the number before the pandemic- 270 were received each month. This increase has continued in the first months of 2021 to an average of 756<sup>8</sup>. Sadly, 20 women were murdered in the same year- 18 of them during the corona months<sup>9</sup>.

This violence index is based on two major databases: first, reported violent offenses received from six public bodies: the Israeli Police, The Ministry of Welfare, the Ministry of Health, the Ministry of Education, and help Centers. Second, Crime Victims Surveys obtain an unbiased estimate of the extent of non-reported violence cases. According to one survey that has been published by the ministry of welfare, violence between spouses is the highest.

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<sup>3</sup> A. Viero, G. Barbara, M. Montisci, K. Kustermann, C. Cattaneo, Violence against women in the Covid-19 pandemic: A review of the literature and a call for shared strategies to tackle health and social emergencies, *Forensic Science International*, 2021, <https://doi.org/10.1016/j.forsciint.2020.110650>.

<sup>4</sup> Morgan A & Boxall H 2020. Social isolation, time spent at home, financial stress and domestic violence during the COVID-19 pandemic. *Trends & issues in crime and criminal justice* no. 609. Canberra: Australian Institute of Criminology. <https://doi.org/10.52922/ti04855>

<sup>5</sup> Ravindran, Saravana and Shah, Manisha 2020. "Unintended Consequences of Lockdowns: COVID-19 and the Shadow Pandemic"

<sup>6</sup> Mahmood KI, Shabu SA, M-Amen KM, Hussain SS, Kako DA, Hinchliff S, Shabila NP. The Impact of COVID-19 Related Lockdown on the Prevalence of Spousal Violence against Women in Kurdistan Region of Iraq. *J Interpers Violence*. 2021 Feb

<sup>7</sup> Jinan Usta, Hana Murr, and Rana El-Jarrah. Violence and Gender. Sep 2021.133-139. <http://doi.org/10.1089/vio.2020.0069>

<sup>8</sup> Lee Yaron. "The Damages of COVID Will Stay With Israeli Women for Years". 2021 March. <https://www.haaretz.com/israel-news/violence-and-discrimination-pandemic-effects-will-stay-with-israeli-women-for-years-1.9599141>

<sup>9</sup> Yoav Begno, Feb 2021 .<https://www.maariv.co.il/news/Education/Article-820456>.

A new "hotline" was established and operated within the framework of the emergency system for dealing with domestic violence during the lockdown. The "hotline" data showed that most of the complaints came, in descending order, from the Northern District (69%), then from Tel Aviv District, Haifa District, Central District, Jerusalem District, and finally from the Southern District<sup>10</sup>.

One research has been conducted at Ben-Gurion University by Dr. Hila Rimmer, Dr. Yael Sneh, and Ronit Lev-Ari, included 519 men and women, at risk of violence. The research found that 66% of the surveyed women preferred to get social support from their families or by contacting women's organizations that help in cases of violence during the corona period<sup>11</sup>.

There are many studies and data about violence, but still, they don't reflect the full extent of the truth. Where those women who suffer violence are less likely to participate in the surveys and less likely to report the violence they have experienced.

Despite the seriousness of the situation, Israel has not yet implemented a comprehensive policy to prevent violence against women and has not yet fully allocated the budget for the national program to address this problem. In my opinion, this study will raise awareness about the problem, and the prevention programs will receive the appropriate treatment and budgets.

## Empirical Strategy

### Ideal Approach

In a perfect world, the ideal model that I would like to use to answer the research question is **a difference in differences model**, where I can obtain an appropriate counterfactual to estimate a causal effect of the treatment policies. This model requires some assumptions, one of them called: the parallel trends assumption; where all the variables are constant except for the dependent and independent variables. To use DID, we need observed outcomes of people who were exposed to the intervention (treated) and people not exposed to the intervention (control), both before and after the intervention. By comparing the changes in outcomes over time between the two groups, we expect that in the absence of the treatment, the unobserved differences between the two groups are the same over time (constant over time)

#### Parallel Trends assumption:

$$E[Y_0(t=2) - Y_0(t=1) | A=1] = E[Y_0(t=2) - Y_0(t=1) | A=0]$$

#### Where:

Y: potential outcome

A=1 treated group, A=0 control group

t=1 before treatment, t=2 after treatment

Theoretically, if I can assume that in the absence of the treatment, the dependent variable of the treatment groups and the control group will move in a "parallel" trend in the outcome, then comparing the observed

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<sup>10</sup>Amir kurtz May 2020. <https://www.calcalist.co.il/local/articles/0,7340,L-3822438,00.html>.

<sup>11</sup> Yoav Begno, Feb 2021 .<https://www.maariv.co.il/news/Education/Article-820456>.

trend of the treatment group to the opposite trend of the control group, we can infer the causal effect of the treatment.

In this study, suppose Israel enacts the lockdown policy on Jerusalem residents, but on Tel Aviv residents (control) does not. We can estimate the effect of the lockdown policy by comparing how this policy in these two cities affects the level of VAW before and after its implementation. By applying this model to the research question, I will expect that in the absence of the lockdown policy, the level of violence against women by their partners will be the same in the control group.

**Expected [level of VAW with the lockdown Policy - level of VAW without the lockdown Policy] for the treated group = Expected [level of VAW with the lockdown Policy - level of VAW without the lockdown Policy] for the control group**

Thus, I can conclude the causal effect of the lockdown policy on the level of VAW by their partners, and what would have happened differently if this pandemic had not entered our lives. The model looks simple and possible to do. However, by entering the inner work of this model we can see that it is more complex in reality.

### Practical Approach

As there is no option to use **DID** model because of the inability to know what would have happened if COVID-19 had not happened, and there is no suitable control group to introduce into this model. I will use **the multiple linear regression model**. This model cannot infer causality, but it can testify the degree of relationship between **the dependent variable**, which is the level of violence (physical, verbal, and sexual) against women by their partners, and **the independent variable**, which is the lockdown policy.

## Data

### Investigation Method and Sample

This study was conducted using data from a self-administered online questionnaire survey [Press Here](#). The sample included 500 Israeli women. For the current study, I limited the sample to **women (above age 18)** who had been **in a relationship**; marriage, or cohabitation. Each woman reported on several parameters including the dependent, the independent, and the control variables. Each woman who has been tested out of the sample is considered as one observation. The observations will be examined over time; two observations will be received from each woman in the sample. The same woman will be asked to rate the level of violence she experienced from her partner one month before the first lockdown (**first period**) and one month after the lockdown (**second period**).

In order to get a reliable conclusion from the survey; I should ensure **enough randomness to reduce selection bias**; therefore, I made sure that the participants do not know anything about the questions before their actual participation. Moreover, the survey has been directed randomly to all the women in the population (women in Israel), not only to the battered women. Therefore, we can circulate the findings of the study.

Finally, I will cross-reference between the collected data from the survey and the data from other sources such as:

1. The Ministry of Health, Labor, and Welfare regarding the number of violence cases received by support centers and hotlines.
2. Comparing the results of the survey to ISRAEL MINISTRY OF PUBLIC SECURITY data regarding the number of indictments filed by the police for gender violence during the first lockdown period.
3. An additional source that may help in my study is **WIZO Violence Report 2019-2020**, which presents violence data from all the government ministries and authorities operating in this field.

### Variable Definitions

**The dependent variable (VAW)** is a **categorical ordinal variable** that measures the level of violence the women experienced by their partners. It ranges between **1-5** where:

- 1: no violence experienced
- 2: low level of violence
- 3: moderate level of violence
- 4: High level of violence
- 5: extreme level of violence

Respondents will rate the level of the violence if they have experienced it one month before the lockdown and one month after the lockdown.

**The independent variable (LOCKDOWN)** is a dummy variable that accepts 0 or 1 values. Where 0 represents the period before the first lockdown, while 1 represents the period after the first lockdown.

In order to ensure that we examine the relationship between the level of VAW and the lockdown, we should isolate the lockdown policy (independent variable) from the effect of other **confounding factors** on the VAW (dependent variable) by holding the control variables constant in the model.

### Confounding factors (control variables):

- **Financial\_Stress** is the level of financial stress the family faces over the two tested periods. It's an ordinal variable ranging from 1 to 5, where:
  - 1: None
  - 2: low
  - 3: moderate
  - 4: high
  - 5: extreme
- **CHILDREN** is a discrete numerical variable that represents the number of children at home and under the financial responsibility of the parents (under age 18). To examine the effect of spatial density at home during the lockdown on the VAW. The increase in the number of children doesn't need to increase the VAW, the opposite could be true. The presence of the children may eradicate the violence against their mothers.
- **WOMAN\_INCOME** is a numeric continuous variable; each woman will be asked to fill her average monthly income. This variable could increase the financial stress (if there is change over the tested periods).

- **PARTNRT\_INCOME** is a continuous variable; each woman will be asked to fill the average monthly income of her partner. This variable could increase the financial stress if there is change over the tested periods). The decrease in the salary doesn't need to increase the level of VAW. High-income partners could have tended to be violent due to other factors.
- **SECTOR** is a categorical discrete variable; in the demographic section of the survey, respondents will specify to which sector they belong. Each sector numerically encoded where secular Jew 1, Orthodox Jew 2, Arab Muslim 3, Arab Christian 4, Druze 5, and Bedouin 6. Each sector has its social norms and culture that may influence the behavior of its belongings.
- **UNPAID\_LEAVE\_WOMAN** is a dummy variable that accepts 1 value if the woman has been sent to unpaid leave and accepts 0 value otherwise. This variable could increase the time spent at home with the partner and could increase the financial stress.
- **UNPAID\_LEAVE\_PARTNER** is a dummy variable that accepts 1 value if the partner has been sent to unpaid leave and accepts 0 value otherwise. This variable could increase the time spent at home with the partner and could increase the financial stress.
- **SOCIAL\_CONTACT** is a categorical ordinal variable; it indicates the level of social communication with friends or family the women had over the two tested periods. It ranges from 1-5; (where 1=none and 4=more than weekly. The communication can be face to face, by phone, social media.
- **T** is the time spent at home with the partner. It is a categorical ordinal variable; it indicates how often the couples stay together. It ranges from 1-5; (where 1=none and 5=extreme). Respondents will rate it one month before the lockdown and one month after the lockdown. This variable correlates with the unpaid\_leave\_partner; if the partner is in unpaid leave then he will spend more time at home.
- **PTV** Partner Tendency to violence is a dummy variable that accepts 1 value if the partner tends to violence and 0 if he doesn't. An early propensity for violence may affect the level of violence at home, without the necessity that it is related to the lockdown period.

### The first regression equation

In order to estimate the coefficients of the independent variable, I will **run the following regression**:

$$VAW = \beta_0 + \beta_1 * LOCKDOWN + \beta_2 * FINANCIAL\_STRESS + \beta_3 * CHILDREN + \beta_4 * WOMAN\_INCOME + \beta_5 * PARTNER\_INCOME + \beta_6 * SECTOR + \beta_7 * UNPAID\_LEAVE\_WOMAN + \beta_8 * UNPAID\_LEAVE\_PARTNER + \beta_9 * SOCIAL\_CONTACT + \beta_{10} * T + \beta_{11} * PTV + \epsilon$$

In this empirical design, we will focus on  $\beta_1$  the coefficient of the independent dummy variable **LOCKDOWN**. This estimator indicates the change (the increase or the decrease) in the level of violence against women by their partners under the impact of the lockdown policy.  $\beta_1$  is the effect of **LOCKDOWN** on the level of **VAW**, keeping all the other variables constants.

We can include many independent control variables in the regression equation. I chose the most relevant variables that I can assess in the framework of the study. There may be **unmeasured confounding factors** that are relevant to women's experiences of violence, such as:

1. Alcohol/drugs used by the partner
2. The partner's psychological distress
3. The self-confidence of the woman.

All are parameters that could affect the level of VAW during the lockdown, but there is no way to measure them by using econometric tools, so I cannot include them in the model. However, I do treat them as **omitted variables** from the regression.

#### The second regression equation

Under the assumption that there are omitted variables, the new regression model will be as follows:

$$VAW = \beta_0 + \beta_1 * LOCKDOWN + \beta_2 * FINANCIAL\_STRESS + \beta_3 * CHILDREN + \beta_4 * WOMAN\_INCOME + \beta_5 * PARTNER\_INCOME + \beta_6 * SECTOR + \beta_7 * UNPAID\_LEAVE\_WOMAN + \beta_8 * UNPAID\_LEAVE\_PARTNER + \beta_9 * SOCIAL\_CONTACT + \beta_{10} * T + \beta_{11} * PTV + \mu$$

Where  $\mu$  includes the omitted variables. We suppose that the omitted variables are **WSC** as the woman's self-confidence, alcohol/drugs use as **ADU**, and partner psychological distress as **PD** follows:

$$\mu = \alpha_1 * WSC + \alpha_2 * ADU + \alpha_3 * PD + \epsilon$$

WSC, ADU, and PD will not stay constants when I add the LOCKDOWN variable.

By using STATA to run the model and to test, the null/alternative hypothesizes:

**H0:**  $VAW = 0; \beta_1 * (LOCKDOWN = 1) - \beta_1 * (LOCKDOWN = 0) = \text{zero}$ ; There is no change in the level of violence under the lockdown policy.

**H1:**  $VAW > 0; (\beta_1 * (LOCKDOWN = 1) - \beta_1 * (LOCKDOWN = 0)) > 0$ ; There is increase in the level of violence under the lockdown policy.



## Simulation of the data analysis

### 1. Filling the survey data in the table:

	ID	LOCKDOWN	FINANCIAL_STRESS	CHILDREN	W_INCOME	P_INCOME	SECTOR	UNPAID_LEAVEW	UNPAID_LEAVEP	SOCIAL_CONTACT	T	PTV	VAW
490	490	0	3	0	9413	4911	6	1	1	4	2	1	4
491	491	0	1	4	978	18989	1	1	0	1	7	0	4
492	492	0	3	5	1417	18583	3	1	0	2	11	1	5
493	493	0	1	1	667	9657	6	1	1	3	26	0	4
494	494	0	3	6	5757	4480	4	1	1	5	1	1	1
495	495	0	5	4	6923	13828	1	1	1	1	1	0	3
496	496	0	5	0	8626	930	5	0	1	5	16	0	1
497	497	0	5	5	7158	13804	1	1	0	2	17	0	3
498	498	0	2	4	4740	10974	4	1	1	3	5	1	3
499	499	0	1	3	7995	9070	6	0	0	3	26	1	5
500	500	0	4	5	4300	5000	6	1	0	4	22	1	5
501	1	1	5	5	1429	431	1	0	1	4	64	0	2
502	2	1	5	3	1850	5575	3	0	1	5	55	0	2
503	3	1	5	2	5822	3017	2	0	0	1	64	1	1
504	4	1	5	6	3558	4056	1	0	0	1	26	0	2
505	5	1	5	6	1727	7581	3	0	1	3	22	0	3
506	6	1	3	2	2707	2336	6	1	0	2	50	1	5
507	7	1	2	2	756	6937	2	0	0	3	48	0	2
508	8	1	3	0	2518	3958	3	0	1	3	82	1	2
509	9	1	3	4	6808	5987	4	1	1	1	19	0	3
510	10	1	1	0	883	12640	2	0	1	4	43	1	2
511	11	1	4	3	5124	2413	4	0	0	1	5	1	2
512	12	1	4	4	6442	10055	5	1	0	2	35	1	3
513	13	1	1	1	7157	14151	3	0	1	1	51	1	1
514	14	1	3	6	3925	1681	3	0	1	4	38	1	1

### 2. Running the regression:

```
. regress VAW LOCKDOWN FINANCIAL_STRESS CHILDREN W_INCOME P_INCOME SECTOR UNPAID_LEAVEW UNPAID_LEAVEP SOCIAL_CONTACT T PTV
> ID_LEAVEP
```

Source	SS	df	MS	Number of obs	=	1,000
Model				F(11, 988)	=	
Residual				Prob > F	=	
				R-squared	=	
				Adj R-squared	=	
Total				Root MSE	=	

VAW	Coefficient	Std. err.	t	P> t	[95% conf. interval]
LOCKDOWN					
FINANCIAL_STRESS					
CHILDREN					
W_INCOME					
P_INCOME					
SECTOR					
UNPAID_LEAVEW					
UNPAID_LEAVEP					
SOCIAL_CONTACT					
T					
PTV					
_cons					

### 3. Interpretation

From the table above if we see that the result is statistically significant. T-statistics is huge; p-value is tiny=0.000. We can reject the null hypothesis  $H_0$ .

By controlling for the other variables in the model, the lockdown policy in Israel is associated with an average increase in the level of violence against women of (%). This relationship is statistically significant at the (%) level.

$\beta_1$  can be used to understand the effect of the LOCKDOWN policy (its direction and its magnitude). However, it should not be used to predict the dependent variable for a set of known independent variables.

If we fail to reject the null hypothesis, that means none of the variables in the regression has affected the dependent variable (the level of VAW).

### Data Limitations

This model has some limitations:

1. Since the collected data is obtained by self-reporting women who experienced violence by their partners over the tested periods, the chosen dependent variable is not necessarily accurate. The women who suffer from violence are less likely to participate in this kind of survey, even anonymously due to different reasons such as:

- \* The fear of reporting the violence by their partners
- \* They do not have any place to go during the period of the lockdown
- \* Feeling of shame.
- \* Safety concerns: maintaining anonymity and providing details over the Internet.

2. The chosen measure of the violence variable ranges from 1-5, if the participant has reported lower numbers, the experiment will show less violence

These two limitations will give a **downward biased estimator**.

3. The duration of the study, may be too short to reflect the impact of the lockdown on the increase in the level of VAW.

4. The number of observations; ideally we would like to perform different samples over different periods around the first lockdown; short-term and long term, to provide more reliable information about the effects of treatment policy. Due to the complexity of performing many samples and the limited tools I have, I chose the two periods mentioned previously.

5. Due to technology complications, not everyone had an equal likelihood of being selected to participate in the research. I suppose young participants' majority. Therefore, the sample will have selection bias and will not represent all the segments of the population. Moreover, the results are not necessarily generalizable to the wider female population.

6. Unmeasured confounding factors that are relevant to women's experiences of violence, such as alcohol use and psychological distress.