



COVID-19 & Intimate Partner Violence in Atlanta, Georgia: Findings from a Mixed-Methods Study

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COVID-19 & Violence: A Research Call to Action¹

- Early in the pandemic, the effects of public health mitigation measures (i.e., shelter-in-place orders) on violence and abuse within relationships was largely unknown.
- Some countries reported disturbing increases in relationship violence: France reported a 36% increase in IPV cases¹ and China reported a two-fold increase in IPV cases in one city in the month following movement restrictions.²
- This largely anecdotal evidence prompted a call for the systematic measurement on the effects of COVID-19 and movement-related restrictions on violence.³

Source: Evans DP. COVID-19 and violence: A research call to action. *BMC Women's Health*. 2020; 20(1):249. <https://doi.org/10.1186/s12905-020-01115-1>.

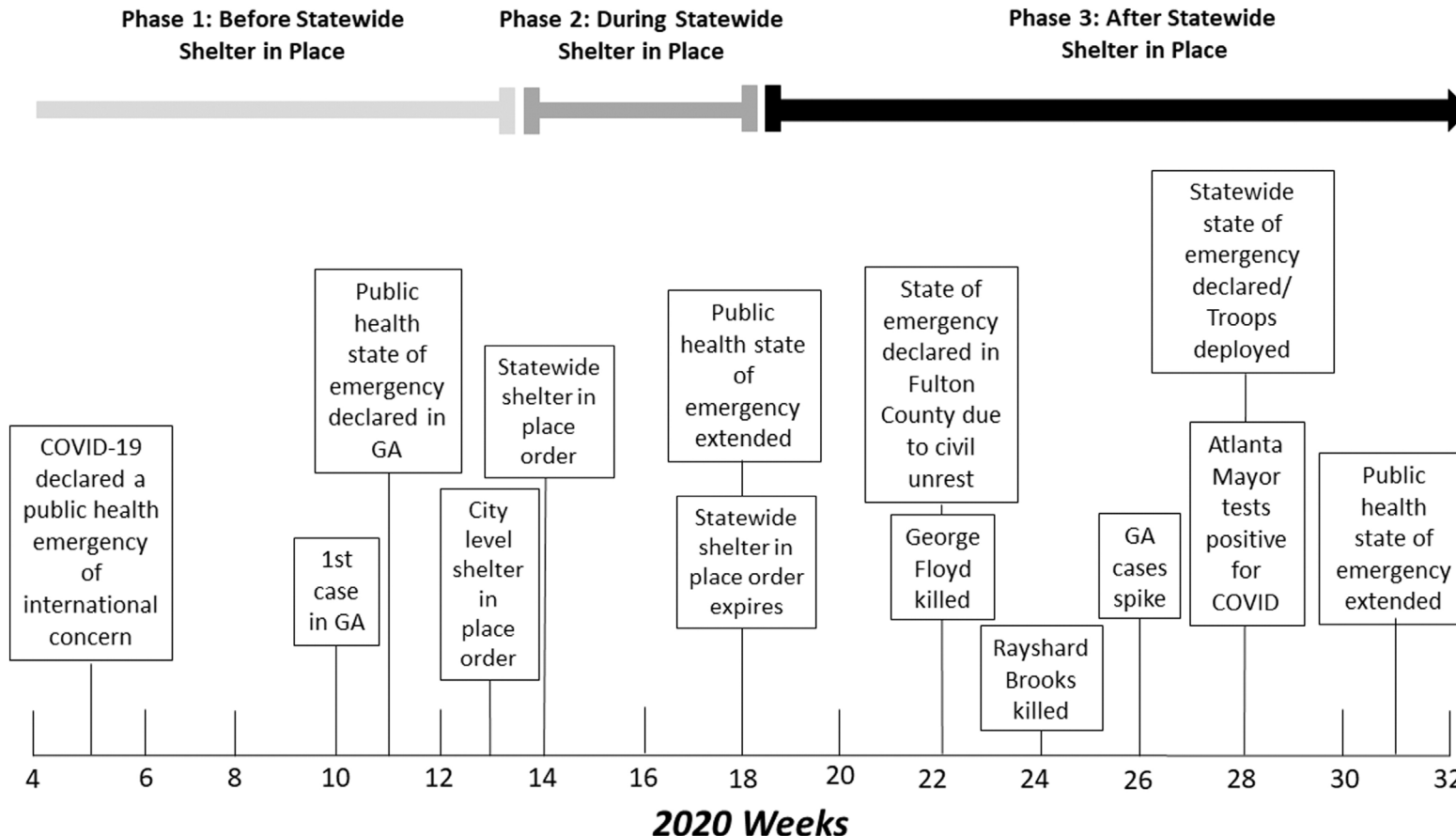


COVID-19 & IPV: The Effect of Movement Related Restrictions on Partner Violence in Atlanta, Georgia as a result of IPV

The study aimed to:

- Determine the incidence of domestic crime during the COVID-19 pandemic using Atlanta Police Department data (Aim 1);
- Determine the incidence of IPV during the COVID-19 pandemic (Feb-August 2020) as compared to the incidence in the prior calendar year (Feb-August 2019) (Aim 2);
- Identify contextual factors related to the hospitalization of traumatic injury and IPV during the COVID-19 pandemic through a detailed chart review (Aim 3); and
- Describe the effects of COVID-19 related movement restrictions on IPV and health-seeking behaviors through in-depth interviews with health care providers and IPV survivors (Aim 4).

Aim 1: Domestic Violence Before & During COVID-19 in Atlanta, Georgia⁴

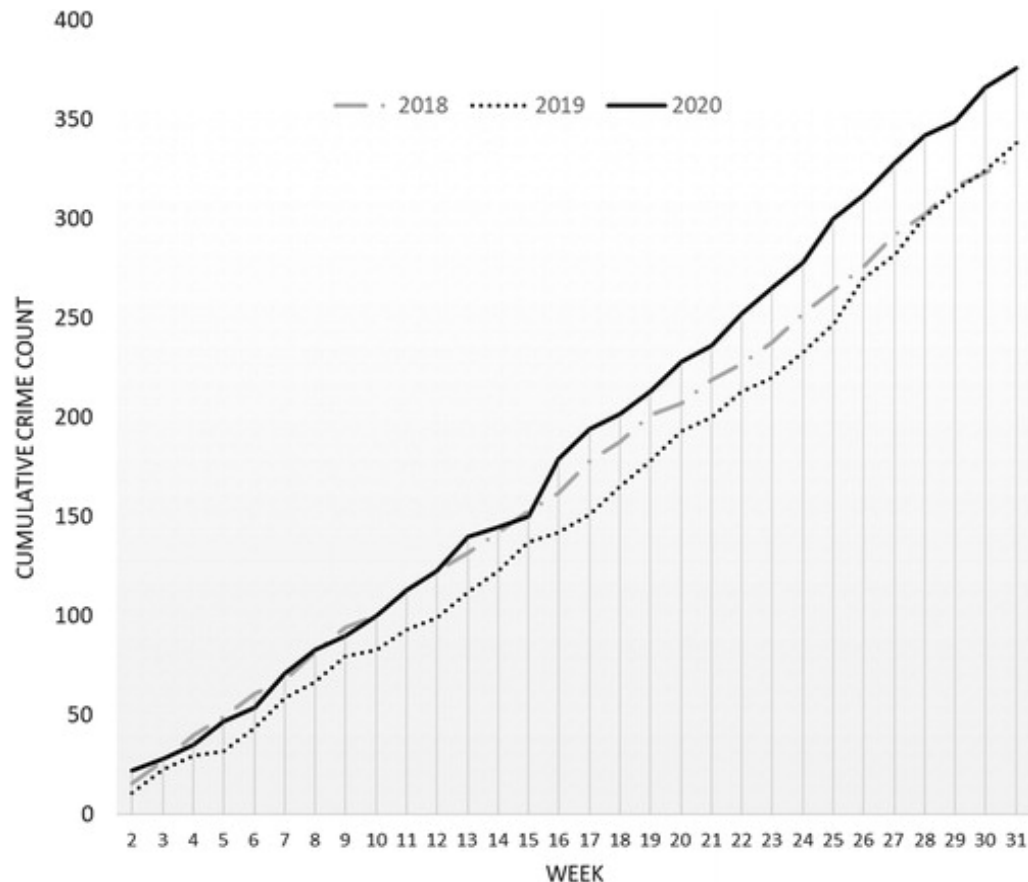


Measured differences in domestic violence incident reports from 30 weeks of crime data collected from the Atlanta Police Department from 2018–2020 (before and during COVID-19).

Source: Evans DP, Ripkey, CE and Hawk SR. (2020) Domestic violence in Atlanta, Georgia before and during COVID-19. *Violence and Gender*. 2020; 20(249). <https://doi.org/10.1186/s12905-020-01115-1>.



Aim 1: Results



- A spike in domestic crimes after city and statewide shelter-in-place orders (Weeks 12-13) gaining in intensity each week, leveling off when the statewide shelter-in-place order was lifted (week 18)
- Domestic crimes rose in weeks 24–28, the period corresponding with the fallout from the murder of Rayshard Brooks & a spike in COVID-19 cases.
- Rise of cumulative counts during the COVID-19 period showed an 11% increase relative to the previous 2 years peaking during the time of movement restrictions.

Source: Evans DP, Ripkey, CE and Hawk SR. (2020) Domestic violence in Atlanta, Georgia before and during COVID-19. *Violence and Gender.* 2020; 20(249). <https://doi.org/10.1186/s12905-020-01115-1>.

Aim 2: Determine the incidence of IPV during the COVID-19 pandemic as compared to the prior calendar year using natural language processing⁵

ICD codes, Clinical Notes and Patient Narratives

- ICD codes, clinical provider, nursing and social worker notes, chief complaints

IPV-Related Terms

- 23 situational terms derived from existing IPV literature (e.g., intimate partner violence, spouse abuse, referral to partnership against domestic violence, etc.)
- 49 extended situational terms which are the specific descriptions of various forms of physical abuse (e.g., attack by significant other, strangle by ex, etc.)

Source: Tabaie A, Zeidan AJ, Evans DP, Smith RN and Kamaleswaran R. "A Novel Technique for Developing a Natural Language Processing Algorithm to Identify Intimate Partner Violence in a Hospital Setting" *The Western Journal of Emergency Medicine*. [Accepted]



Aim 2: Determine the incidence of IPV during the COVID-19 pandemic as compared to the prior calendar year using natural language processing⁶

Preliminary results:

- IPV visit rate was higher in 2020 (0.82%) compared to 2019 (0.72%) ($p=0.02$).
- Number of IPV encounters for patients with no prior hospital visits for IPV was higher in 2020 (361, 0.59%) compared to 2019 (203, 0.25%) ($p < 0.001$).
- No statistically significant difference in age, death rate, or length of stay.

Source: Zeidan AJ, Evans DP, Smith RN, Tabaie A, Kamelswaran R. Estimating the Prevalence of Intimate Partner Violence at an Urban Hospital Before and During the COVID-19 Pandemic Using a Novel Natural Language Processing Algorithm. *Violence and Gender*. <https://doi.org/10.1089/vio.2021.0091>



Aim 3: Identify contextual factors related to the hospitalization of traumatic injury & IPV during the COVID-19 pandemic₇

Methods:

Interrupted Time-Series Analysis

- Quasi-experimental Design
- Interruption Variable = ATL Movement Restrictions (March 16, 2020)

January 2016 – August 2020

- Purposeful long tracking period before pandemic

Source: Smith R, Nyame-Mireku A, Zeidan A, Tabaie A, Meyer C, Jayaraman Muralidharan V, Kamaleswaran R, Williams K, Grant A, Nguyen J, Hurst S, Hanos D, Benjamin E, Sola R, **Evans DP**[§]. *The impact of the COVID-19 pandemic on intimate partner violence at a level 1 trauma center: An interrupted time series analysis. American Surgeon.*



Aim 3: Results

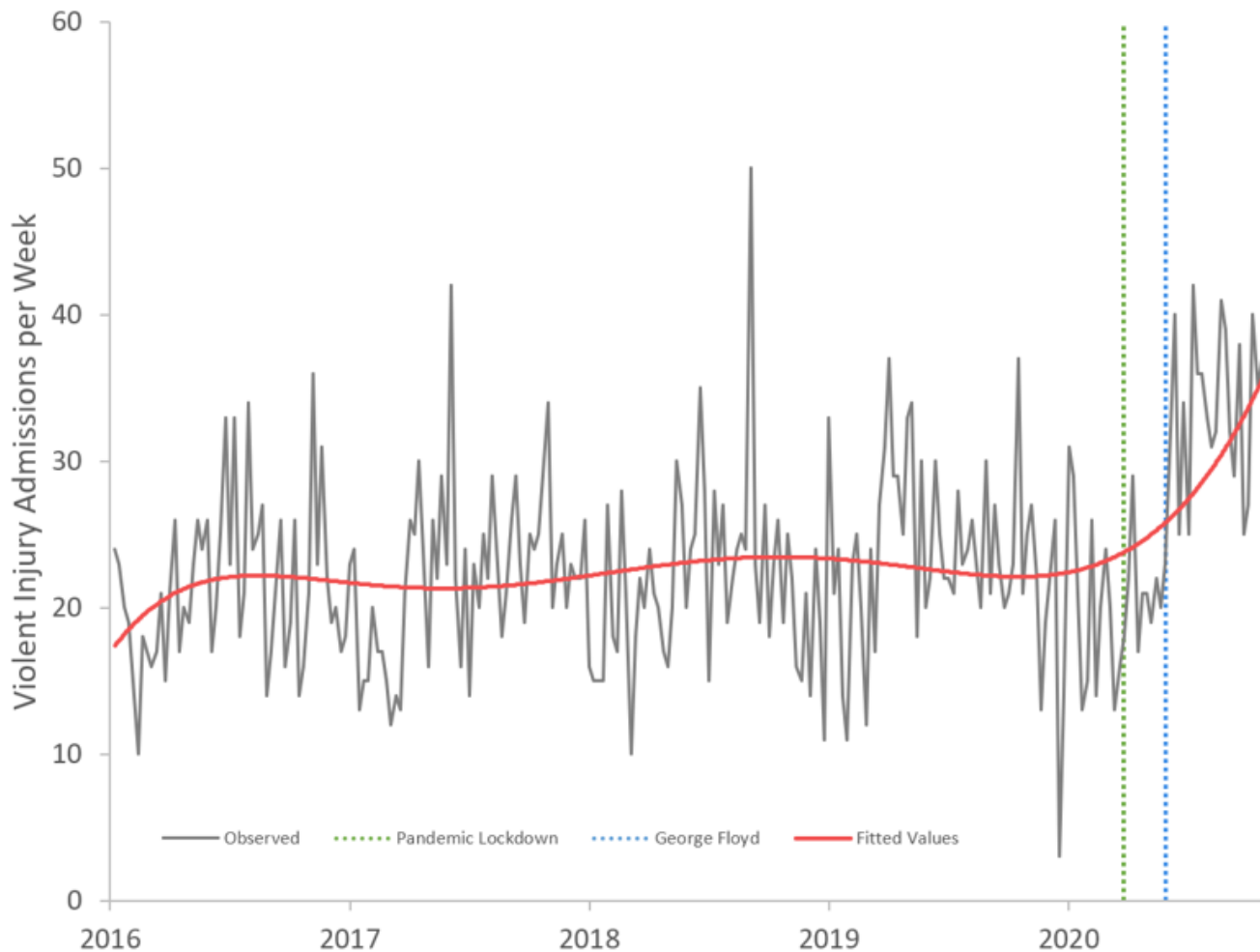


Figure 1. Violent injury incidence per week (grey line) between January 1, 2016, and October 29, 2020 (n = 252 weeks) and fitted Poisson regression (red line). Green dotted line represents the start of COVID-19 containment policies (March 16, 2020) and the blue dotted line represents George Floyd's death (May 25, 2020).

Source: Smith R, Nyame-Mireku A, Zeidan A, Tabaie A, Meyer C, Jayaraman Muralidharan V, Kamaleswaran R, Williams K, Grant A, Nguyen J, Hurst S, Hanos D, Benjamin E, Sola R, **Evans DP**[§]. *The impact of the COVID-19 pandemic on intimate partner violence at a level 1 trauma center: An interrupted time series analysis*. *American Surgeon*

Aim 3: Results

N = 292	Mean
Median Age [IQR 28,47] 36	38.54
% Male	27.39
Race Black/African American White Other	74.3 21.23 4.1
Mechanism of Injury Penetrating Blunt	75 (25.6) 217 (74.3)
Injury Severity Score	9.21 (1-41)

Aim 3: Results

	Pre-COVID n= 260	During COVID n= 32	p-value
Age mean (years), range	39.1 (16-94)	33.9 (18-64)	0.04
ICU Days	1.44 (0-43)	1.40 (0-10)	0.94
Ventilator Days	0.63 (0-35)	0.12 (0-3)	0.03
Hospital Days	5.9 (0-60)	3.8 (0-27)	0.05

Source: Smith R, Nyame-Mireku A, Zeidan A, Tabaie A, Meyer C, Jayaraman Muralidharan V, Kamaleswaran R, Williams K, Grant A, Nguyen J, Hurst S, Hanos D, Benjamin E, Sola R, **Evans DP**[§]. *The impact of the COVID-19 pandemic on intimate partner violence at a level 1 trauma center: An interrupted time series analysis*. *American Surgeon*

Aim 4: Describe the effects of COVID-19 related movement restrictions on IPV & health-seeking behaviors

- **Design:** Cross-sectional qualitative study with two original in-depth interview guides
- **Data Collection:** In-depth interviews conducted November 2020 - May 2021 virtually via Zoom
- **Participants:** 12 health care providers including emergency medicine physicians, trauma surgeons, and social workers employed at large public hospital; 11 survivors were recruited from hospital records, community-based organizations and Facebook ads
- **Analysis:** Thematic with deductive & inductive codes using MAXQDA 20

Aim 4: Describe the effects of COVID-19 related movement restrictions on IPV & health-seeking behaviors⁸

COVID-19 movement-related restrictions likely exacerbated IPV

"There was an uptick in intimate partner violence for people who had to shelter-in-place with their abuser" - EM physician

HCPs encountered many practice & community-oriented barriers in IPV care provision during COVID-19

"We did experience difficulty in our resources for placement. So, there were a bunch of women's and children's shelters that shut down because they couldn't safely isolate people within their shelter."
- EM physician

HCPs suggested process & partnership improvements for IPV response

"I wonder if, like a PR [public relations] campaign could be useful, like, "Hey, you're going to be stressed out. If you need help, call this national hotline and talk it out." So people feel like they have an outlet" - EM physician

Source: Hendrix E, Narasimhan S, Ripkey C, Zeidan AJ, Smith RN, & Evans DP (2022). "Boiling water but there's no pop-off valve": Health care provider perceptions of the effects of COVID-19 on Intimate Partner Violence. *Journal of Family Violence*. [Accepted]



Aim 4: Describe the effects of COVID-19 related movement restrictions on IPV & health-seeking behaviors

COVID-19 impacts paved the way for relationship challenges catalyzing violence

“Control. COVID gave him an opportunity to tighten the reins, if you will, around my throat.” (39-year-old Indigenous/White female survivor)

COVID19 movement restrictions catalyzed new relationships quickly and sparked new or intensified violence in existing relationships

“We didn't have fights or arguments before that. Nooo. First time a man has physically attacked me. That was supposed to be my man, who's supposed to love me. He was supposed to be the man, he was supposed to be my confidant. What if anything happened to me? He would be there to take care of me. He flipped the script.” (54-year-old Black/African American Female survivor)

IPV help-seeking during COVID unveiled holes in support services

I'm at there knockin' the door, ringin' the doorbell. And the man comes....., we don't come outside and answer, and take reports. I go, look, I'm runnin' for my life right now... The man [police officer] said, ma'am, if you need help, you gonna take yourself down to where you just came...If you need help, you're going to take yourself better than what you just came from.” (54-year-old Black/African American female survivor)

Source: Hendrix E, Narasimhan S, Ripkey C, Zeidan AJ, Smith RN, & Evans DP (2022). “Boiling water but there’s no pop-off valve”: Health care provider perceptions of the effects of COVID-19 on Intimate Partner Violence. Journal of Family Violence. [Accepted]



Conclusions & Next Steps

- COVID-19 and movement-related restrictions have exacerbated relationship violence in what the UN has called the "shadow pandemic."
- As the pandemic continues IPV must be systematically measured in health care and other settings to ensure an appropriate response.
- Policy makers must consider ways to scale up support for domestic violence response during the ongoing pandemic and as a matter of public health preparedness.
- Apply our new algorithm for predictive use and survivor identification in a hospital setting
- Conduct interviews with community-based organizations to explore ways to improve the hospital to community-based care transition

Acknowledgements

- Amy J. Zeidan, MD (Emory SOM-Emergency Medicine)
- Rishikesan Kamaleswaren, PhD (Emory SOM-Biomedical Informatics)
- Subasri Narasimhan, PhD, MPH (HDGH)
- Shila R Hawk, PhD (Applied Research Services Inc.)
- Carrie E. Ripkey, MPH (HDGH)
- Ellen Hendrix, MPH (HDGH)
- Afua Nyame-Mireku, MPH (BSHES)
- Nicole González, MPH (HDGH)
- Kathryn Wyckoff, MPH (BSHES)
- Kaylee Stephenson MPH(c) (HDGH)
- Georgia Coalition Against Domestic Violence
- DeKalb Women's Resource Center
- DeKalb County Domestic Violence Taskforce
- Injury Prevention Research Center at Emory
- Woodruff Health Sciences Center





GRACIAS! THANK YOU!

OTHER SESSIONS WITH MY COLLABORATORS:

TUES, 11:30-1 (TENERIFE 1-3) : MARTIN HERNAN DI MARCO, FEMICIDE PERPETRATORS' NARRATIVES ON GENDER, VIOLENCE AND IDENTITY IN BUENOS AIRES, ARGENTINA

WED, 2:30-4 (GRECO-DALI): ADAPTING A MOBILE SAFETY PLANNING APPLICATION FOR BRAZILIAN WOMEN

THURS, 11:30-1 (GOYA) : SOFIA HUSTER, IPV AMONG LGBTQ+ ADULTS IN LATIN AMERICAN AND THE CARIBBEAN: A SYSTEMATIC REVIEW

THURS, 2:30-4 (TENERIFE 1-3): MARCOS SIGNORELLI, PREVALENCE OF IPV AGAINST ADULT WOMEN IN BRAZIL

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3. Evans, D. P. (2020). COVID-19 and violence: A research call to action. *BMC Women's Health*, 20(1), 249. doi:10.1186/s12905-020-01115-1
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6. Zeidan AJ, Evans DP, Smith RN, Tabaie A, Kamelswaran R. Estimating the Prevalence of Intimate Partner Violence at an Urban Hospital Before and During the COVID-19 Pandemic Using a Novel Natural Language Processing Algorithm. *Violence and Gender*. <https://doi.org/10.1089/vio.2021.0091icine>. [Accepted]
7. Smith R, Nyame-Mireku A, Zeidan A, Tabaie A, Meyer C, Jayaraman Muralidharan V, Kamaleswaran R, Williams K, Grant A, Nguyen J, Hurst S, Hanos D, Benjamin E, Sola R, **Evans DP**^s. The impact of the COVID-19 pandemic on intimate partner violence at a level I trauma center: An interrupted time series analysis. *American Surgeon*.
8. Hendrix E, Narasimhan S, Ripkey C, Zeidan AJ, Smith RN, & Evans DP (2022). "Boiling water but there's no pop-off valve": Health care provider perceptions of the effects of COVID-19 on Intimate Partner Violence. *Journal of Family Violence*. [Accepted]