

2021

Data Science Analytics: zeroing in on violence against women & girls Vis- a'-Vis Covid-19 Pandemic lockdowns

SHERO AGENCY PROJECT PROPOSAL

“PROVIDING TECH SOLUTIONS FOR GENDER BASED VIOLENCE”

BUSINESS UNDERSTANDING

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Background

“The outbreak of COVID-19, emerging data and reports from those on the front lines, have shown that all types of violence against women and girls, particularly domestic violence, was reported to have intensified according to the United Nations Women report which sites violence against women as the Shadow Pandemic growing amidst the COVID-19 crisis.

Facts according to UN Women 2020

- Globally, even before the COVID-19 pandemic began, 1 in 3 women experienced physical or sexual violence mostly by an intimate partner
- Emerging data showed an increase in calls to domestic violence helplines in many countries since the outbreak of COVID-19.
- Sexual harassment and other forms of violence against women continued to occur on streets, in public spaces and online.
- Survivors were reported to have limited information and awareness about available services and limited access to support services.
- In some countries, resources and efforts were diverted from violence against women response to immediate COVID-19 relief.

Hayley Boxall, Anthony Morgan and Rick Brown in their research paper also cited that Since the first case of the novel coronavirus (COVID-19) was confirmed in Australia in January 2020, both the disease and the measures implemented to limit its spread have had significant impacts on the day-to-day lives of Australians. In the past few months there have been numerous media reports about the risks to the safety of victims of domestic violence (intimate partner violence), including concerns about an increase in violence, more complex forms of violence, and the impact of social distancing measures on the ability of victims to seek help (Morton 2020; Nancarrow 2020; Pfitzner, Fitz-Gibbon & True 2020).

Various factors have been identified as contributing to a potential increase in both the prevalence and severity of domestic violence during the COVID-19 pandemic, including:

- Victims and offenders spending more time together; • increased social isolation and decreased social movement, which may restrict avenues for women to seek help;
- Increased situational stressors associated with domestic violence (e.g. financial stress and job insecurity); Statistical Bulletin 28 Australian Institute of Criminology 2
- offenders feeling out of control due to situational factors and using violence and abuse as a means of creating a sense of control; and
- increased alcohol consumption among domestic violence perpetrators (Delaney 2020; Morton 2020; Nancarrow 2020; Payne, Morgan & Piquero 2020).

There is a lack of research into the prevalence of domestic violence among Australian women since the start of the COVID-19 pandemic. Given the majority of women experiencing violence and abuse within their relationships do not engage with police or government or non-government agencies—particularly while they remain in a relationship with their abuser—this is a significant gap in knowledge (ABS 2017). Relatedly, there are concerns that opportunities for women to contact and engage with domestic violence services or the police have been even more constrained during periods when social movement was restricted (Fitz-Gibbon & Meyer 2020). There are particular concerns about the safety of women experiencing coercive controlling behavior (Pfitzner, FitzGibbon & True 2020).

Africa Union Commission in their 2020 joint research paper on Gender-Based Violence in Africa during the COVID-19 Pandemic sited the following

Kenya, according to the Kenya National Council on Administration of Justice, there is a significant spike in sexual offences in many parts of the country. Sexual offences such as rape and defilement have constituted more than 35% of all reported cases.¹²

Egypt, there was a 19% increase of violence against family members linked to strict measures being implemented to limit the spread of COVID-19, according to a UN Women Egypt and Baseera survey. Amongst women surveyed from 04 to 14 April 2020, 11% of women had been exposed to violence the week before the survey.

A rapid assessment conducted by UN Women in Libya at the onset of the pandemic indicated that nearly half of the women surveyed feared escalation of violence at home at the beginning of the lockdown period.

South Africa: Official reports show that within the first week of level 5 lockdown, South African Police Services (SAPS) received 2,320 complaints of gender-based violence, with only 148 related charges made. These statistics represent a 37% increase from the weekly average of South African GBV cases reported for 2019.¹⁶ Additionally, the GBV Command Centre in South Africa recorded a spike in gender based violence cases reported during the lockdown during 27th March to 16th April with a total of 10,660 through phone calls, 1503 through unstructured supplementary services data (USSD) and 616 SMSs. On 16th April alone, the Centre has received 674 cases.¹⁷

Nigeria: reporting from 24 states across the country shows that the number of reported incidents of domestic violence spiked by 56 percent during the first two weeks of April compared with the same period in March, after lockdown measures were enacted on 31 March. In Lagos State, cases of domestic violence have surged by over 100 percent during the lockdown period (as of 14 April) compared with the number of cases reported for the entire month of March.

All in all 67% of women have experienced abuse which is double the average global rate (according to UNFPA report from March 30 2020 - April 5th);²³ defilement cases,²² rape cases and 2 cases of passion killings were recorded, of the 23 defilement cases , 7 were children under 13 years of age.

The Data GAP

As per the narration of the Africa Commission, the Data gap Data collection on the types of violence against women and girls, is essential to prioritize addressing violence against women in the response to COVID-19 and recovery efforts. Gender-Based Violence in Africa during the COVID-19 Pandemic. The emerging data of the impact of COVID-19 on women and girls highlighted in this briefing may currently likely only be reflecting the worst cases. Without access to private spaces, many women will struggle to make a call or to seek help online. Moreover, the potential loss of income due to self-isolation, potential lack of information regarding which GBV services remain available, and fears of contracting the virus at service points has created multiple barriers whereby survivors of GBV may find themselves in a near impossible situation: unable to seek support, unable to access services, unable to leave their abusers²⁶ and with nowhere to go. Thus understanding the scale and diverse experiences of sexual and gender based violence (SGBV) for women and girls during the COVID-19

pandemic remains paramount for all African countries. Cameroon, Kenya, Malawi, South Africa, Uganda and Zimbabwe,²⁷ provide example of taking steps to improve the collection and use of violence against women data in the COVID-19 context.

Addressing the Data Gap is where our agency comes in; which will be reiterated in the proceeding project breakdown.

Partnership with Global Objectives

Our agency pledges allegiance, relevance as well as partnership with the following United Nations Sustainable Development Goals

- SDG 5: Achieve gender equality and empower all women and girls: Women and girls, everywhere, must have equal rights and opportunity, and be able to live free of violence and discrimination. Women's equality and empowerment is one of the 17 Sustainable Development Goals, but also integral to all dimensions of inclusive and sustainable development. In short, all the SDGs depend on the achievement of Goal 5
- SDG Target 5.2 Eliminate all forms of violence against women and girls
- SDG Target 16.1 Significantly reduce all forms of violence and related death rates everywhere

Hypothesis

- There is not enough reliable and safe reporting channels for intimate partner abuse
- Women have no access to information about their rights and the support they can get with issues regarding gender based violence
- Covid-19 along with its restrictions served as a catalyst for increase in domestic and gender based violence

Problem statement

Regardless of the strides made globally and locally in the women's rights liberation movements and in gender affairs economically, constitutionally and politically; Women and girls are still susceptible to violent crimes, sexual and non-sexual. The Covid-19 pandemic only exposed the degree of its severity(a handful of women particularly in southern Africa died due to intimate partner violence) and how much there is still exceedingly more room for much to be done to actualize progressively the multi-dimensional development as well as the social welfare of women.

Comprehensive Project objective:

To innovatively provide a technological solution to a social issue affecting women and girls, particularly gender based violence and intimate partner abuse by means of engaging data-science, analytics and programming tools. The process is broken down in three phases

- To conduct a deductive data analysis of abused women and girls during post the enforcement of Covid-19 restrictions & lockdowns zeroing in on countries with data availability in Africa, Nigeria being the largest sample size, zooming in on Egypt, Ghana, South Africa, Kenya.
- To develop a reporting system that populates a data base, collecting data in form of reports that narrates their witnessing of or experience with abuse and intimate partner violence, collecting data demographics as well as key information like mode of abuse and frequency.
- To develop an intelligent technology in form of an application linked to the reporting system data base, which not only reports imminent violence but operates as an emergency hotline and responds to a woman who expresses active and urgent distress and solicits relevant help by sending the woman's geographical coordinates to the right authorities.

Lastly to use data collected through the reporting system for predictive analysis and report writing in order to sponsor preventative measures through engaging the right partners; governmental and private who are aligned with causes for women's social issues and gender affairs

Project Tools

The project will heavily depend on the usage of python programming, statistical modelling data science libraries like Numpy and Pandas, Matplotlib, SQL and predominantly use Microsoft excel for Data Visualization tools; vivid graphical representations and VBA.

Zeroing in on the innovative technology; what is the big idea(SHERO Application and the reporting system interface?

- What if we could stop the death of one woman, what if we can prevent perverse injuries that scar her for life and cause her to be self-conscious and battle with self esteem
- What if a task force could be sent to rescue a young adolescent girl before a gross and brutal molestation
- What if we could invent an application a software that's prompt, fast efficient, quick to respond, an application that makes the job of law enforcers and the justice system easier
- What if there was a panic button that a woman can press, that signals red and alerts everyone in the chat box that there's a woman in trouble in the vicinity and within a matter of seconds even if she cannot make the call herself, a system has been alerted , her GPS location is tracked and the nearest community task force is sent to the rescue
- What if there was a software an application that can be easily downloaded compatible with most phones, minimal data usage , whereby the mere pressing of a button, if it's too unsafe for the woman to call or text, the artificially intelligent online watcher sends a notification to a designated taskforce in a telecommunications company , that alerts the security service or police to attend a woman in trouble at a certain location
- What if at the verge of realizing you are no longer unsafe , you can stall some time, press the panic button and a rescue cab or Uber is sent to your location within 15 minutes
- What if we could save abuse or kidnapping victims and ensure they are brought back to safety through a software , a software that begins to track their location as well as record the proceedings of an event automatically when you press a panic button or shake the screen

We present to you a 21st century tech solution to minimizing and eliminating violent crimes against women

THE SHE'RO "HELP" APPLICATION

- The user friendly efficient justice companion, online artificially intelligent watcher that's here to protect women who have been failed by the system and by their community
- The SHE'RO community , a safe place where you can report misfortune without judgment, a woman to woman friendly interface that also allows live interaction with other women, girls as well as social workers, clinical therapists, emotional first aid experts and task forces , agents put in place to look out for reports and cases

How exactly would this service be put to work?

- Bringing into perspective firstly the software or application is an online community interface, women and girls from all walks of life can subscribe, the intelligence in the application clusters women who have subscribed who are in the same regions or residencies to be clustered
- The application interface is also an informative site that educates women and girls about their rights, safety options and support services in their region and also teaches methods of self-defense as well as practical steps to follow when in the face of danger
- The interface also allows the interaction of subscribers with social workers and therapists to talk through their trauma especially for the perpetual and repetitive abuse victims , and how to get out of it as well as the avenues to follow that are region specific
- The application and interface must be designed in such a way to partner with or to be able to disseminate to local telecommunication companies, security systems, local police and law enforcement and volunteer community watchmen.

The results of data analysis and the demo of the reporting interface and the software application will be included in the final report as well as our final recommendations.

Team Breakdown & Role Allocation

Team Co Management

- ❖ Munenyashaishe Hove (Project Manager)
- ❖ Chinenye Vivian (Software development Lead)
- ❖ Choice Iruh (Data Analytics/Research Lead)

Data Cleaning/Statistical Modeling Team

- ❖ Ibilolia Akahome
- ❖ Funmilayo Aina
- ❖ Mercy Oluwayotin

Research & Design Team

- ❖ Okoro Uchenna
- ❖ Fatimo Ajeboye
- ❖ Amarachi Ugagbe