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Abstract

We survey the literature in economics and related fields on the relationship between the COVID-19 pandemic and conflict behavior. We cover the effects of the pandemic on micro-level conflict (among individuals), macro-level conflict (interstate, intrastate, and extra-state), and the effect of existing conflict on the spread of the pandemic. We find an increase in intimate partner violence, a spillover between work-family conflict and domestic violence, and a spike in the anti-East-Asian crimes. While there was an initial drop in the macro-level conflict count, it eventually returned to the pre-pandemic level. Deteriorating economy and food insecurity associated with the pandemic were major drivers of conflict in the developing countries, but appropriate state stimulus reduced such conflicts. The existing history of conflict has a heterogeneous effect in different societies in terms of the spread of the pandemic. We conclude by pointing out the future research avenues.

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1. Introduction

Human beings suffer the most in times of crisis, and the COVID-19 pandemic is no different. The impact of this pandemic on various parts of life will persist for years to come. One of the important aspects of the pandemic, however, is its effect on (and relationship with) the behavior in conflict. While ailment, restrictions to movement, and limited resources reduce the scope of engaging in a conflict; mental and economic stress, and opportunistic behavior have the opposite effect. In this paper we cover the current literature from economics and related fields such as politics, health, peace research, psychology etc. to summarize the effects of the COVID-19 pandemic on individual and aggregate conflict, the effects of existing conflict on the spread of the pandemic, and point out the future paths of academic research in these areas. A timely, shared understanding across fields of the underlying risks of conflict is key to its prevention. Hence, this survey aims also to provide a thorough exploration of the impact of the pandemic on the underlying causes of conflict and enable policymakers to adjust policies and programs to address these risks.

The pandemic has significantly exacerbated poverty and inequality – adding massive pressure to already overwhelmed social and health systems across the globe. From its appearance in December 2019 until May 2022, the virus has infected 530 million people, with a death toll of 6.3 million worldwide. Moreover, there are various evidences that people changed their behavior worldwide: an increase in disorderly and violent conducts were observed both at local and international levels. The underlying cause is attributed to the stress caused by the pandemic, along with a low reward situation at work and home (Chowdhury, 2020). Prolonged isolation has weakened social ties, which, in turn have resulted in a greater propensity to break the existing social norms.

Economically, the world is facing a recession. The state-imposed lockdowns and the fear of infection took a severe toll on the global economy. Fernandes (2020) forecasted a long-term GDP growth rate of up to –10% for 30 countries, predicting –15% for some. According to the World Bank, despite an unprecedented policy response, the global economy shrunk by at least 5.2% in 2020 – the greatest global contraction in 80 years. COVID-19 and the economic crisis caused by the pandemic are also converging to reverse the hard-won gains in global poverty reduction and shared prosperity. In 2020, an estimated 88 million to 115 million people were pushed into extreme poverty, measured by the international poverty level of $1.90 a day. An additional increase of 23 million to 35 million in 2021 brought the total number of new poor to between 111 million and

149 million (IDA & IFC, 2020). A widespread recession results in more conflict, both at the individual and at the aggregate level (Barret and Chen, 2021). Within the first two years of the ongoing pandemic, many articles documented the tremendous impact of COVID-19 on various conflicts such as territorial and cultural clashes, gender-based violence, hate crimes, and a behavioral shift towards aggression – to name a few.

Chowdhury (2020) predicted the effects of COVID-19 on conflict behavior at home, at work, and in the society, whereas Polo (2020) examined the impact of the COVID-19 pandemic on patterns of armed conflict around the world. We use such predictions as benchmarks, and survey the literature on the COVID-19 pandemic and conflict behavior. To specify the scope of our survey, we define 'conflict' as physical or mental violence or potentially violent conduct that requires costly effort – excluding criminal acts such as robbery, theft etc. By specifying these qualifiers, the definition draws the scope and intentionally excludes the analyses of the effects of the pandemic on market competition/litigation/rent-seeking/petty criminal acts etc. We mainly focus on quantitative research in the economics literature. However, given the scope, the survey also draws from the literature on crime, health, peace science, development, psychology, and political science.

This survey aids the ongoing research on conflict and COVID-19 by providing a concise summary of the effects of the pandemic on conflict behavior at an individual and at the aggregate level. We partition the survey as follows. In the next section, we study the impact of the pandemic on micro-level conflicts, i.e., conflicts among individuals and organizations (e.g., household conflicts, workplace conflicts). In the third section, we focus on the macro-level conflicts comprising interstate conflict (e.g., a war between states), intrastate conflict (e.g., civil war, domestic terrorism), and extra-state conflict between states and external non-state actors (e.g., international terrorism, colonial wars, trade wars). Next, we focus on how ongoing conflicts shaped the nature of and the response to the COVID-19 pandemic. We conclude in the final section with a discussion on the impacts of the pandemic on already existing social fault lines created by disparities in access to programs and policies, and highlight possible areas requiring further research.

At the household level, we find that forced cohabitation due to lockdown is a significant cause of concern in developed countries, above and beyond any economic distress that the lockdown might have caused. The most recorded increase is in the cases of emotional violence like verbal abuse, mental harassment, etc., which are largely neglected when forming traditional policy responses to

domestic violence. The rise is more pronounced in the initial days of the lockdown, but the overall rising trend remains concerning. Expectedly, the impact of the COVID-19 pandemic on Intimate Partner Violence is starker in developing countries, where the rise is as high as 40% compared to the developed countries' average of about 10% increase. There is also a spillover effect of mandatory work-from-home policies, where work conflicts result in a spillover of aggressive behavior at the household level. Finally, violence against East Asians was on the rise.

For macro-level conflicts, there was a drop in the reported cases of conflict in the immediate aftermath of the World Health Organization (WHO) announcement regarding the pandemic; but a quick recovery followed the initial shock. Nationwide shutdowns negatively impacted instances of conflict-ridden activities involving ethnicity or religion, whereas there was a rise in COVID-related conflicts. These conflicts were frequent in economically weaker areas, lacking sufficient government support to overcome the pandemic-induced resource crunch. As time passed, the pandemic became less of a shock and recorded instances of all forms of conflict increased.

Regarding the effects of conflict on the spread of the pandemic, we notice two main issues. First, diverting scarce resources to fight the pandemic deteriorated the existing fragile health system in conflict-ridden areas where malnutrition and other issues are common. Second, the existing conflict resulted in a lack of governance, which resulted in impediment to implementing policies. As a result, the SARS-CoV-2 virus spread heavily in such areas. Furthermore, the effect is heterogeneous because existing conflict affects the spread of the virus depending on the country and the society.

2. COVID-19 Pandemic and Micro-Level Conflict

This section summarizes the research on how the pandemic has affected conflicts in human relationships within the household and society. The behavioral change at the individual level may also have an impact on the broader society, but that is covered in the next section. Here, we focus on the impact of the COVID-19 pandemic on individual level conflicts related to household, workplace, relationships, and social identity. A prominent common trait that stands out is that – it is often not possible to isolate the impact of the pandemic on individual conflict behavior in any particular setting such as household, work, or identity. There are substantial spillovers from one to another, leading to a change in behavior concerning conflicts in each of these aspects.

The most alarming impact of the COVID-19 pandemic has been the exponential rise worldwide in the reported Intimate Partner Violence (IPV) cases, forcing the United Nations to declare it as a 'shadow pandemic' (UN Women, 2020). The COVID-19 pandemic led many governments across the globe to adopt a typical non-pharmaceutical response in the form of nationwide or local lockdowns. Such lockdowns automatically resulted in significant economic stress by shutting down day-to-day economic activities for a prolonged period. Lockdown itself and the resulting economic distress are the two main mechanisms through which the pandemic is believed to have affected IPV rates. More commonly referred to as domestic violence, IPV can be divided into three broad categories – physical, verbal, and emotional. A comparatively higher increase in verbal and emotional violence is observed in developed countries in the surveyed literature. While the literature is sparse, developing countries show a higher rate of physical IPV. A vast majority of such cases were caused by the unequal sharing of the workload at home during the pandemic induced lockdowns and related problems stemming from work-from-home policies.

While trying to isolate the impact of one from the other on domestic violence in Spain, Arenas-Arroyo et al. (2021) found that lockdowns, independent of the economic stress caused by them, bore a greater degree of responsibility for increasing the recorded cases of domestic violence against women. They ran an online survey with women aged 18 to 60 living with a male partner during the confinement. This targeted survey helped overcome the limitations of existing data by collecting unique data on IPV prevalence; both reported and unreported to the police. Using a probit model, they found that forced cohabitation significantly increased psychological violence, which is also least likely to be reported to the police.

Arenas-Arroyo et al. (2021, Table 2) also showed that both males and females suffered from economic stress and being locked in together. Overall, because of the pandemic, Spain reported a 23.4% increase in reported cases of IPV in the first three months of the lockdown. These findings are supported in the United States (US) by Graham et al. (2021), who ran an online survey of 658 US adults. They found that nationwide lockdowns and work-from-home mandates disrupted the balance between work and home life and put more pressure on women with children, who reported more significant pain and discomfort than men and women without children.

Similar results were also found in Singapore by Neo et al. (2022). Using a sample of 754 married, working mothers in Singapore, the authors conducted a factor analysis of Work-Family Conflict (WFC) and a hierarchical linear regression result for Work interfering with Family and Family interfering with Work. For each unit increase in negative impacts of COVID-19, Work-Family Conflict increased by 0.20 and 0.21 units for Work interfering with Family and Family interfering with Work, respectively. Upon further analysis, they concluded that in Singapore, the COVID-19 pandemic resulted in higher Work-Family Conflict for women.

In addition, such continuous conflict between the domains of work and home impacted spousal relationships and resulted in rising hostility (Kulik & Ramon, 2021). Champeaux & Marchetta (2021) highlighted the need for equality in housework sharing, with 49% of French couples reporting intra-household conflicts due to unequal housework distribution during the lockdown. They conducted an online survey with partnered female respondents. It showed gender gaps in hours spent on household chores, especially childcare, but a limited increase in male participation in household chores like shopping for day-to-day needs during the lockdown. Similar to Singapore, 28% of respondents with children and 22% without children reported increased conflict in the household. Using a fixed-effects model, the authors found that when the woman is at home during the lockdown, doing more than three-quarters of the housework, lockdown effects on household conflict become significant and positive. One-third of the women who reported IPV in this survey suffered from verbal abuse. Police interventions for family disputes increased by 44%, and the number of calls to the helplines for domestic violence almost doubled.

Leslie & Wilson (2020) found that the first three months of lockdown, March to May 2020, saw an increase of 7.5% in calls reporting domestic violence in 14 large US cities. They used a difference-in-difference methodology to compare calls reporting domestic violence before and after social distancing began relative to the same period in 2019. Effects were the largest in the first five weeks when calls related to domestic violence increased by nearly 10%. Such a rise in IPV could only be compared to the effects of a home team upset loss or a hot day (Card & Dahl, 2011) in a non-pandemic situation. Interestingly, while any specific demographic group did not drive the rise, it appears to be driven by households without a prior history of domestic violence.

Similar to France, out of the various types of IPVs mentioned above, verbal and emotional abuse had a sharp increase during the lockdown in the US (Luetke et al., 2020). These findings indicate a persistent pattern in the developed world, with countries such as Singapore, Spain, France, and the US reporting increased verbal and emotional abuse – the two types often overlooked when policy decisions involving IPV are made.

If we aim to focus out of the developed country, however, globally, about 264 million women live in fragile, conflict-ridden developing countries, where they face multiple challenges of poverty, gender-based violence, and discrimination instituted on inadequate legal protection. These factors were only heightened by the COVID-19 pandemic (IDA & IFC, 2020). Kumar and Anupama (2022), in a descriptive study, for example, noted a steady 14% to 30% increase in the violence against women in India during the pandemic. Paul et al. (2021) ran an online within-subject survey before and during the pandemic induced lockdown among 271 respondents and found an increase in the short form composite abuse scale – signaling a possible surge in the IPV.

Systematic quantitative investigations on the rising instances of IPV due to the pandemic in the developing world are sparse, with an exception being the study from Peru by Agüero (2020). Peru imposed a strict nationwide lockdown starting in mid-March 2020. Using a Poisson counts model to analyze administrative data on phone calls to the helpline for IPV (known as *Línea 100*), the author showed that the incidence rate increased by 48% between April and July 2020 compared to pre-lockdown figures, with effects increasing over time. This result is important because nearly 60% of women had already experienced IPV before the pandemic in Peru. Moreover, most IPV cases reported in Peru are physical violence instead of verbal or emotional violence. Hence, such a massive increase in IPV during the pandemic demands immediate attention.

Comparing the findings in the developed countries with that of India or Peru, it can be inferred that the rise in (physical) IPV is more pronounced in developing countries, where women have lesser resources available to protect themselves. This inference highlights the importance of immediate policy responses in developing countries – reinforcing the need for detailed research on the impact of the pandemic on IPV prevalence. In the absence of such studies, one cannot safely claim whether the lockdown, the unequal distribution of household chores, economic stress caused

by the lockdown, or spillover between work and home caused such a sharp rise. Research on the drivers of the rise in IPV in developing countries will allow better policy responses in future.

It is recorded in the research on identity and conflict that identity-centered conflict becomes more frequent at the time of a crisis (see, e.g., the survey by Chowdhury, 2021). An important feature of such identity regarding IPV is the sexual orientation of the people concerned. It is vital because LGBTQ individuals are likely to experience greater stress due to their minority status and the absence of tailored public assistance programs (Gruberg, 2020). While most studies focused on the female in heterosexual relationships, Li and Samp (2021) studied the impact of the pandemic on conflict among same-sex couples. They found that the perceived threat of COVID-19 was positively associated with greater relationship-termination intentions, anxiety, depression, and substance use, while being a person of color amplified such association. This study has highlighted the need for more focused research beyond heterosexual households to develop targeted policies in response to the pandemic. The need is compounded by the fact that individuals in same-sex households are likely to face more significant economic stress as they are more likely to work in highly affected industries, have a lower income, rely on governmental support, and lack health care access compared to their heterosexual, cisgender counterparts (Whittington et al., 2020).

3. COVID-19 Pandemic and Macro-Level Conflict

A pandemic can be observed as a non-armed crisis with substantial social and economic implications. Drawing on literature from diverse research areas, this section summarizes how the COVID-19 pandemic has impacted macro-level conflicts in different directions and the response to such conflict itself. Specifically, we focus on the impact of the COVID-19 pandemic on the tension between groups with different social identities, and intra and inter-country level (armed and non-armed) conflicts. Social tension and intra-country conflict occur within a single state, whereas inter-country conflict involves violence between two or more states. We also list out how the ongoing pandemic has affected existing conflicts and has led to the creation of new ones.

Following Sen (2007), Chowdhury et al. (2016) showed that the salience of a particular dimension of ‘real’ identity, such as race or religion, can initiate and escalate the conflict. Since a crisis often makes social identities salient, the COVID-19 crisis risks deepening societal tensions concerning the dimension of such social identities. In Cameroon, e.g., a breakdown of inter-community trust

increased attacks on citizens suspected of carrying the COVID-19 virus. There was higher communal tension against Muslims in India. The Islamic State launched attacks in Afghanistan and Niger after publicizing its intention to take advantage of the situation (IDA & IFC, 2020).

Since the SARS-CoV-2 virus arguably originated from China, a salient identity associated with the COVID-19 related conflict is the identity of being an East Asian. The documentation of such racial conflict is still evolving. Whereas there is research in other fields (e.g., Gover et al., 2020) focusing on hate crimes against East Asians in the US, there is no such research from economics. Rather, the three studies documenting such hate crimes are from Europe. Dipoppa et al. (2022) used a novel dataset from Italy and showed that hate crimes against East Asians increased during the pandemic. However, such an increase was influenced more by the perception of unemployment than health issues. Political rhetoric from the ultra-right-wing groups also fueled such crimes. Gray and Hansen (2021) focused solely on London, using the data from the London Metropolitan police. Using a difference-in-difference method, they analyzed the change in reported hate crimes against people of Chinese origin for the last quarter of 2019 and the first quarter of 2020 compared to various other crimes and found an increase in the hate crime against people of Chinese origin. They, however, did not find the mechanism behind such an act. Carr et al. (2022) expanded the scope to racial hate crime against East Asians in England and Wales for 2020. They used data from various sources, including the UK Police forces, and found a significant 50% increase in such hate crimes. Like other conflict cases, such hate crimes were less likely during the lockdown, but the numbers went up again after the lockdown ended. In contrast to Dipoppa et al. (2022), the authors also found that such hate crimes correlated with perceived health threats and the Government's announcement of the perceived health threat due to the spread in China.

Following the declaration of the pandemic by the WHO in March 2020, the threat of the SARS-CoV-2 infection and related policy responses in terms of lockdowns drove a notable reduction in recorded aggregate level conflicts. However, as the Armed Conflict Location and Event Data (ACLED) showed, by late summer 2020, daily inter-group conflict counts returned to their pre-March 2020 levels (Bloem & Salemi, 2021).

Berman et al. (2022) discovered significant heterogeneity when comparing the impact of lockdown on recorded conflict levels. COVID-related mobility restrictions result in a short-term drop in

protests and riots, that involve general public; But it did not affect conflict events that involved armed groups. While there was a reduction in other types of conflict, there was a sustained increase in the COVID-related conflicts in the initial months after the pandemic's announcement. Moreover, the population in the wealthier nations recorded less conflict, whereas the poorer countries recorded no change in reported conflict numbers. Instead, there is a trend of reinforcement of existing fractionalization on ethnic and religious lines, with the COVID-19 pandemic being used as a catalyst to fan existing out-group hate. This observation matches the UK study on racial hate crimes aimed at East Asians (Carr et al., 2022).

Perhaps more important than the immediate effect, the consequences of the pandemic are very likely to accelerate violent conflict in the medium to long term. According to Fielder et al. (2021), this is first because the pandemic exacerbates structural weaknesses, including the sharpening of societal divisions, severe disruptions in the education sector and deteriorating socio-economic circumstances. Second, the pandemic has curtailed actors and institutions that might be able to reduce the risk of violent escalation. Trust in the state and security institutions has suffered in many countries due to dissatisfaction with handling the pandemic. Moreover, the postponement of elections and increasing levels of government repression hampered democratic processes.

While we discuss these in the consequent paragraphs, we also note a recorded rise in instances where the majority blame the pandemic on the minority population. Governments are found to be supporting the vilification of groups and blaming the pandemic on them to ensure there is limited focus on overall governmental mishandling of the pandemic. Such findings are consistent with the observations from the studies in social identities above, as well as the theories of scapegoating during epidemics and pandemics (Jedwab et al., 2021).

Mid-term intra-country conflict during the pandemic in the developing countries is closely related to food security and the rising food price index. The lockdowns disrupted traditional supply chains, causing extreme volatility in food accessibility. Moreover, the inability to benefit from government support schemes triggered incidents of conflict. Tabe-Ojong et al. (2022) literature review on food (in)security at the time of the pandemic. In a survey conducted in Nigeria by Adebayo and Oluwamayowa (2021), the majority of the households reported a lack of resources to purchase food, and a high number of them supported violence as a means of attaining food.

Using the ACLED dataset, Gutierrez-Romero (2020) found that longer local lockdowns increased the likelihood of riots, violence against civilians, and food-related conflicts in 24 low-income African countries. By constructing a monthly local index of prices at the market level, she estimated that a 10% rise in this price index is linked to a 0.7% increase in violence against civilians. Notably, the impact of the rising food prices was dampened in countries such as Burkina Faso, Malawi, and Namibia due to welfare and labor interventions. These were again quantified by constructing a welfare/labor COVID-19 policy index. The author showed that a 0.1-unit increase in such a policy index reduced the likelihood of conflicts by nearly 0.2%.

Beyond Africa, using cross-country data for more than 100 countries, Farzanegan and Gholipour (2021) showed that with sufficiently high levels of government stimulus support, the positive impact of COVID-19 on intra-country conflict may be significantly dampened or even removed. Only in countries lacking resource allocation to support such programs, with allocation restricted to below 5% or 6% of the GDP, they found a significant risk of internal conflict. This conflict resulted from greater COVID-19 associated death and consequent public anger.

The findings by Gutierrez-Romero (2020) and Farzanegan and Gholipour (2021) spell out the need for anti-poverty measures in combination with medical measures while tackling the pandemic in countries where the population is more likely to face food shortages, and the society is already highly fractionalized, creating a fertile ground for civil discord. Government policies that ensure social security for the worst affected population play a central role in preventing conflict. Perceptions of exclusion from Government in times of recession play a very strong role in social conflict. Group inequality, rather than individual inequality, also has a more significant impact (Stewart and Jarquin, 2002). This impact was further shown by Menton et al. (2021) for the indigenous population in Brazil, who already had limited access to the public healthcare system. The authors showed that the Government had attempted to appropriate Indigenous land when the media and the mass were more concerned with the pandemic. Such appropriation has greatly increased resource conflicts and indigenous resistance.

Hence, while one may expect that the COVID-19 crisis and the related acute stress would result in more pro-social behavior (Von Dawans, 2012) and incentivize opposing groups to unify – supporting ceasefires and peace initiatives, that was not the case in the field. Rather, the COVID-

19 crisis played into existing conflict fault lines and threats to peace processes. The pandemic-related lack of national peace processes and conflict oversight has also provided an opportunity for armed campaigns and increased local violence in developing countries such as the Democratic Republic of Congo, Kenya, Libya, South Sudan, and Yemen (Bell et al., 2020).

While acknowledging regional variation and analyzing real-time data on battle events and COVID-19, Mehrl and Thurner (2020) confirmed that the net effect of the pandemic on the global conflict level is insignificant. This analysis was done by aggregating observations to the country-week level as reporting quality is likely to differ between weekdays and weekends. Due to numerous confounding factors in such an analysis, the authors examine the effect of COVID-19 on armed conflict more formally. They use a difference-in-difference framework by leveraging differences in when countries were affected by – and responded to – COVID-19. The identification strategy exploits the fact that the pandemic spread to different countries at different times. The final results again suggested that the spread of coronavirus did not affect global levels of armed conflict.

The overall summary from these studies shows an immediate negative impact of the pandemic on intra-country conflict, but the scale of the effect was heterogeneous across societies and countries. The mid-term effect of the pandemic is more heterogeneous than the immediate effect. On the one hand, the difference in pandemic related recession, food (in)security issues, and fractionalization increased conflict. However, on the other hand, government measures in medical support and economic stimulus reduced conflict. Hence, it is important from a policymaker's point of view to tease out each of these effects. The highly varied impacts also explain the perceived null effect of the spread of COVID-19 and lockdown policies on the global conflict at a broad level.

Hence, overall we observe a mixed result across the countries, time, and the scale of conflict. However, while summarizing the effects of the COVID-19 pandemic on aggregate level conflicts, the fact that the pandemic had an impact on the conflict behavior is well documented. Moreover, country or society-specific results help policymakers in that context make intelligent and efficient policies to tackle the impact of COVID-19 and its effects on conflict behavior.

4. The Impact of Conflict on COVID-19 Outbreak

Conflicts, especially armed conflicts, have always had significant effects and grave consequences related to transmitted diseases that are difficult to deal with. Historically, wars have disrupted the human-microbe balance, resulting in devastating outbreaks of microbial diseases worldwide with high morbidity and mortality rates. The most notorious pandemic of all time in the past – the Plague – was caused by the spread of Yersinia Pestis aggravated by refugees fleeing war zones (Kaniewski and Marriner, 2020). Hence, it is important to focus also on the mirror view effects of existing conflicts on the SARS-CoV-2 outbreak. In this section, we scrutinize how ongoing conflict situations have affected the spread of the COVID-19 pandemic, and distinguish between the characteristics of the pandemic in conflict and non-conflict zones.

Overall, two broad outcomes from the conflict-ridden areas emerge, and both are relevant to the developing world. First, diverting scarce resources to fight the pandemic worsened the already overburdened health system dealing with malnutrition and other endemics. Before COVID-19, real per-capita income in conflict-ridden economies was forecasted to increase by 1.4% in 2020. However, it is now expected to fall by 6.5% (IDA and IFC, 2020). Second, policy paralysis due to the lack of governance in such areas has allowed the virus to spread heavily with very little to no information about the actual numbers on the ground – for both infections and deaths. This lack of information affected tackling the virus and preventing the pandemic.

In Somalia, the official COVID-19 numbers have remained very low. But at the same time, authorities in Somalia have responded with very drastic restrictive measures. While quantitative studies are still to be run, a qualitative study conducted by Braam et al. (2021) with respondents in Mogadishu and Baidoa revealed that the COVID-19 response severely reduced income. As a result, the secondary economic impact of the pandemic, rather than the infection itself, was more important. Unlike Somalia, analyzing official data from Libya, Syria, and Yemen, Daw (2021) showed that the ongoing armed conflict helped spread the COVID-19 pandemic and led to a gross undercounting of infections and deaths. Conflict zones caused armies to come into close contact with each other and caused the displacement of people. They also resulted in breakdowns in public health infrastructures, and overcrowding and unsanitary conditions in refugee camps. These factors are responsible for the further spread of infectious diseases (Banerjee, 2019).

There are two other possible mechanisms through which an individual's outlook shaped by conflict can affect the response to the COVID-19 pandemic. First, existing conflict can raise the threshold-of-acceptability of the number of deaths caused by the virus. Second, acquiring the experiences of confronting conflict crises together in adverse situations and adopting new measures can affect behavior. Understandably, the first mechanism will have a negative effect on controlling the pandemic, whereas the latter will have a positive one. Considering the first mechanism, in countries where people are accustomed to conflict, the pandemic did not lead to major policy changes as long as the deaths were not an extremely high number. Iran, for example, initially refused to impose a national lockdown despite many deaths and even the later lockdowns were also relaxed (Venkatesan, 2020). This is because the government was aware that the population would be unlikely to react to a pandemic, and the benefits of keeping the economy running in a state that is already reeling under scores of sanctions exceeded the cost of civilian deaths. On the other hand, in line with the second mechanism, Ekzayez et al. (2020) showed that conflict-ridden Northern Syria tackled the COVID-19 surprisingly well, given the scarce available resources. They showed that chronically occurring conflict led the population to create an 'Early Warning and Response Network' for other diseases earlier, which helped tackle the COVID-19 pandemic.

The literature provides mixed results on the effects of conflict on the spread of the pandemic. Depending on the nature of the existing conflict, the history associated with it, and the norm in the society, an existing conflict facilitated the spreading of the pandemic in some countries. In contrast, it facilitated the tackling of the pandemic in some other countries. Further research is needed in this area, especially outside the Middle Eastern or North African (MENA) regions.

5. Discussion

This survey covers the contemporary literature from economics, health, peace research, development, etc., and examines the inter-relationship between COVID-19 and conflict behavior. We first investigate the literature on the effects of the pandemic on conflict behavior at an individual level. Next, we focus on the effects on the aggregate level conflict behavior, and finally, we cover the literature on the effects of ongoing conflict on the severity of the pandemic. This study also points out how the COVID-19 pandemic has harmed the social fabric. The pandemic is still ongoing, particularly in less developed countries, and further results will follow. While the current survey is selective, it is a much-needed comprehensive survey of the existing literature to

understand the situation at hand better and help make informed decisions. As informed policymaking is the best preventative measure against conflicts at the individual, national, and global levels; this survey aims to aid future research and improve how governments and institutions will design policies as a response to the pandemic in the coming years.

We find that the domestic violence and work-life conflict increased because of the pandemic and the lockdown. Although the incidences of the aggregate level conflict decreased at the beginning of the pandemic, they eventually came back to the pre-pandemic level. The effects of conflict on containing the pandemic have been mixed and society specific. This survey also points out the need for further research in various areas, and below, we briefly discuss those.

Specific to the micro-level conflicts, we point out a need for further research on IPV in developing countries. While the effects of the pandemic on IPV in the developed countries are better recorded, it is scarce in the developing world. Moreover, a standard measure of IPV across countries is lacking. Considering the discussion on increased household conflicts, Behar-Zusman et al. (2020) introduced a COVID-19 family environment scale (CHES) to measure the impact of social distancing due to COVID-19 on household conflict and cohesion. It modifies existing measures by considering a specific confinement scenario where family members under lockdown share a life-threatening situation. The scale is developed using data from an online survey with 3,965 respondents from 81 countries and provides a tool to measure the impact of a pandemic on familial resilience. It would be useful to apply such measures in developing countries.

The summarized results also shed light on the importance of policy measures in combating the pandemic and conflict. Hate crimes against the people of East Asian ethnicity increased during and after the pandemic. More importantly, such an increase correlates with the economic conditions, and the rhetoric used against such a community by either far-right groups or the government. Policy measures around these may allow restricting such conflict in the future.

In addition, a country's propensity for violent conflict can be predicted through the relative status of women: particularly their vulnerability to violence. Countries with 10% of women in the labor force are nearly thirty times more likely to experience conflict than countries with 40% of women in the labor force (United Nations, 2018). As the COVID-19 pandemic has decreased female labor

force participation and increased violence against women across the globe, new policies to combat such increases in IPV and other conflicts are much required.

At the macro level, research on the effects of the COVID-19 opportunistic authoritarian moves by the governments (e.g., in Brazil, India, or Belarus) on internal conflicts is scarce. Moreover, while there are news reports and anecdotal evidence regarding the effects of the pandemic on inter-state conflicts, research in this area is sparse. Various authorities used the pandemic to strengthen their control and agenda, increasing inter-state conflict. Taiwan has accused China of employing the pandemic to practice cognitive warfare (spreading misinformation about the COVID-19 outbreak in Taiwan). The government utilized the pandemic to fuel ongoing conflicts with the European Union and strengthened its authoritarian hold over Belarusian institutions in Belarus. Most notably, Russia exploited the unstable situation to annex greater parts of Ukraine, and the pandemic-related needs of Ukraine, among other issues, to force an agreement. Thorough empirical research on each of these topics is warranted.

The effects of conflict on the spread of the pandemic are studied only around the MENA countries. However, Russia, Ukraine, and neighboring Poland, which has allowed around 2.5 million Ukrainian refugees to cross its borders, had also recorded unprecedented COVID-19 infections in the second quarter of 2022 when globally, the number of COVID-19 infections was slowly going down. Analyses of data from these countries and comparing the results with the MENA countries will provide further insights.

Finally, although there is ample empirical research on the interrelationship between the COVID-19 pandemic and conflict behavior, currently, there is no theoretical or experimental research. There is much need for theoretical modelling of the changing behavioral patterns witnessed at home and work following the pandemic for investigations on micro-level conflict. Issues such as the effects of resource availability on conflict intensity can be studied theoretically and in the lab (See, e.g., Baik et al., 2020). As empirical models often provide overall results, teasing out different effects (e.g., the effect of the pandemic, related mental anxiety, and economic stress on IPV) is often not possible from the field data. Running laboratory or lab-in-the-field experiments will complement such gaps in research. We hope these avenues of future research outlined in this survey will help researchers and policymakers alike.

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