

Anthropogenic Disaster: Petrol Bomb Explosion Consequences Analysis in Bangladesh

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Abstract

In the recent past, petrol bomb explosion in Bangladesh has been brought combat trauma to the innocent civilian. The purpose of this study is to explore the consequences of petrol bomb explosion and find out the probable solution to reduce its effect. The semi-structured questionnaire survey for primary and secondary data collection; focus group discussion and key informants interview method were followed. This research has been conducted in different city of Bangladesh between 1st January 2016 and 30th June 2016. A total 200 respondents were purposively selected in order to face to face interview. In addition to, 10 focus group discussion and 20 key informant interviews were performed to collect qualitative information. The secondary data was collected from secondary sources. Over 95 percent of the respondents reported that the hartal/aborodh (Strike/Blockade) was the major cause of petrol bomb explosions and 87 percent was reported about the establishing political dominance. Petrol bomb explosion has a significant impact on economic, social, and health sector. The economic impact has mainly resulted in individual level (96 percent), 87 percent on Government sector, and 80 percent on the industrial sector. Besides this, social consequences have increased the criminal activity (86 percent) and the unemployment rate (78 percent) as well as created fear/anxiety (73 percent) in the society. Additionally, the major health impact on the burn (98 percent), death (85 percent), and post-traumatic stress disorder (77 percent). Therefore, the establishment of stabilizing political practices, publicized agreement on expected electoral conduct, protection of democratic space for opposition parties and civil society, and strong local and international election monitoring procedure will helpful to reduce the political violence.

Keywords

Anthropogenic, Disaster, Petrol Bomb, Violence, Bangladesh

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1. Introduction

Historically, Bangladesh has been affected by a number of natural [58] and human made disaster [35, 29, 21], namely acute poverty, high population density, high birth rates, high child mortality, frequent natural disasters like floods,

cyclones, and tornados, low literacy rates, high rural-urban disparity, low rates of participation by women in economic activities, and high unemployment. In the last two decades, the country has encountered a number of other problems such as industrial accidents, industrial strife, deforestation, high environmental pollution, rural-urban migration, political

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repression, boycott of parliamentary activities by the opposition party, frequent political hartal (general strike), bikkhov (agitation), and oborodh (blockade), among other problems that had been encountered in the past [54].

Bangladesh is a democratic country, but it faces the huge political problem. On gaining independence in 1971, Bangladesh adopted the Westminster model of parliamentary democracy [45]. As a democratic country, political participation usually takes place in two modes: conventional and unconventional. The conventional political behaviour was established after the independent by the rule of law, such as participating in electoral politics through voting [59, 24]. The system, however, was replaced in quick succession by authoritarianism [32], the single-party system [9], and personal rule [47] which is generally known as unconventional forms of political participation [22, 17]. Due to the increase in inequality, the worldwide form of political behaviour is shifting from conventional to unconventional. Mistrust of the system is pinpointed as the main driver behind the rise of unconventional political participation [17]. The mass upsurge against the personal rule of General Hussein Muhammad Ershad in 1990 [47] led to elections in 1991 which once again installed the parliamentary system that lasted until 2006 [45]. After that, the unconventional political practices have been increased, typically by hartals, blockades, petrol bombing etc. [33]. In 2007, the fledgling democracy was again interrupted in Bangladesh. President Iajuddin Ahmed, with the army's backing, declared a state of emergency on January 11, effectively suspending political activity across the country after months of political wrangling, transportation blockades, economic disruptions, street violence, and governmental paralysis. The pending January 22 parliamentary elections were also postponed and the sitting caretaker government (CG) was replaced by a nonpartisan CG whose officials were drawn primarily from the private sector [28].

Most cases of in political violence Bangladesh are rooted in the polarization of the two major parties, the AL (Awami League) and the BNP (Bangladesh Nationalist Party) [23]. In 2005 and 2006, just before the 9th general election, political violence claimed 271 and 330 lives respectively and caused 29,503 injuries of various degrees. Before that, during the political unrest in 2002 and 2004, the total number of fatal casualties and wounded due to political violence was 399 and 21341 respectively [55]. In 2013, the pre-election clash between the 14 party coalition led by the AL (the ruling party) and the 18-party coalition led by the BNP worsened due to the war crimes trial and disagreements over the caretaker government [7]. Bangladesh witnessed 75.5 days of hartal and blockades from the end of January until December 2013 [31]. Deliberate attacks against civilians using homemade explosives, mainly petrol

bombs, claimed 492 lives and left more than 22,000 people injured [12]. This meant that the political atrocities prior to the 10th national election period went beyond just a clash between partisans of the major political parties; rather it was mainly targeted at the general public to hinder their everyday life [13]. In previous time Bangladeshi people were faced longtimeHortal, Road blocking, the procession of parties people. But in recent time this country people face one of the major man-made disasters such as petrol bomb explosions and these explosions related to Bangladesh national elections in 2015. These petrol bomb explosions use different political parties for establishing their demands.

Petrol bombs, also known as Molotov cocktails, are a classic homemade weapon used over the last 70 years [61]. According to the scientist, the petrol bomb as a bottle that contains inflammable liquid and has an ignition source [61]. A typical Petrol bomb/Molotov cocktail consists of a breakable glass bottle that contains a flammable liquid mixture; an ignition source, usually in the form of a liquid soaked cloth (wick), is used to cover the bottle opening [34]. The ignition source is lit and the bottle is immediately thrown on the target surface; upon impact, the glass breaks and spills its contents on the surface, thus resulting in the formation of a liquid pool that is instantly ignited by the ignition source [38]. Being a simple, cheap and easy to make incendiary device, known also as a gasoline bomb [43], Petrol bomb have been used as weapons for many years. These devices were used during the Spanish Civil War and in World War II and it also played an important role to demolish the anti-tank weapon [60, 38]. According to Malaysia police, there are a large number of forensic cases where petrol bombs are used as weapons in acts of vandalism, terrorist activities, street violence, street-fighting, violent riots, etc. [43]. Due to the low cost and wide availability of the required raw materials, Petrol bomb are frequently used today by protesters and riot groups in urban guerrilla warfare operations and incidents between demonstrators and law enforcement bodies [15]. In the recent years, the use of Petrol bomb in Bangladesh has been increased significantly. Besides this, Bangladesh has recently gained much international focus in the international security arena and international politics. It has been suffering from the menace of radicalization and terrorism for the past two decades notwithstanding its impressive economic growth over the past two decades at an average rate of 6% GDP per year. Despite its impressive economic growth and social development, Bangladesh has become a target of the Islamist militancy over the past two decades [36].

From the petrol bomb explosions, many people were faced with unwanted burn pain and many people death occur. According to information gathered by Odhikar, from January to December 2015, a total of 197 persons were killed and 8312

injured in political violence. Among the killed, 69 persons were burnt to death in petrol bombs and arson attacks during blockades and hartals and five were killed during municipality elections. Of the 8312 injured, 689 persons were burnt in petrol bombs and arson attacks during blockades and hartals [51]. In recent time the different newspaper has been published news, most of them related to petrol bomb explosions. For instance, at least 34 people have died and more than hundred have been injured, most of them in firebomb attack [3]. In addition to, police reported that at least 30 people have died in arson attacks as well as more than 7,000 people have been detained in the country's worst bout of political violence [4]. Additionally, Petrol bomb attacks killed morethan 20 people and injured dozens, where most of the victims were children [5]. Anti-government protesters firebombed a bus full of sleeping passengers in eastern Bangladesh, killing seven and several passengers were attack on a truck [2]. On the other hand, six people died when petrol bombs hit packed bus from the northern district of Gaibandha as well as in the southern district of Barisal killed three people due to the arson attack on a truck [1]. Besides this, more than eight people were killed in

clashes with police, and one died following injuries from a crude bomb blast [6]. When Human Rights Watch visited in the Dhaka hospital where burn patients were taken, it was so overcrowded that some were forced to sleep in the corridors. Most patients said they had not had any warning they were going to be attacked and had not seen who had thrown the bombs [30]. Bangladesh is an overpopulated country and many people live under the poverty level and when these people were faced with petrol bomb explosions, they and their family face unbearable pain. For these reason when petrol bomb explosions occur it's not only an incident it's also a man-made disaster for Bangladesh. The main objective of the present study is to find out the major consequences related to petrol bomb explosions in Bangladesh. There are some specific objectives are:

- To find out the reason of petrol bomb explosions;
- To determine the consequences of petrol bomb explosions;
- To explore the solutions for reducing the petrol bomb explosions in Bangladesh.

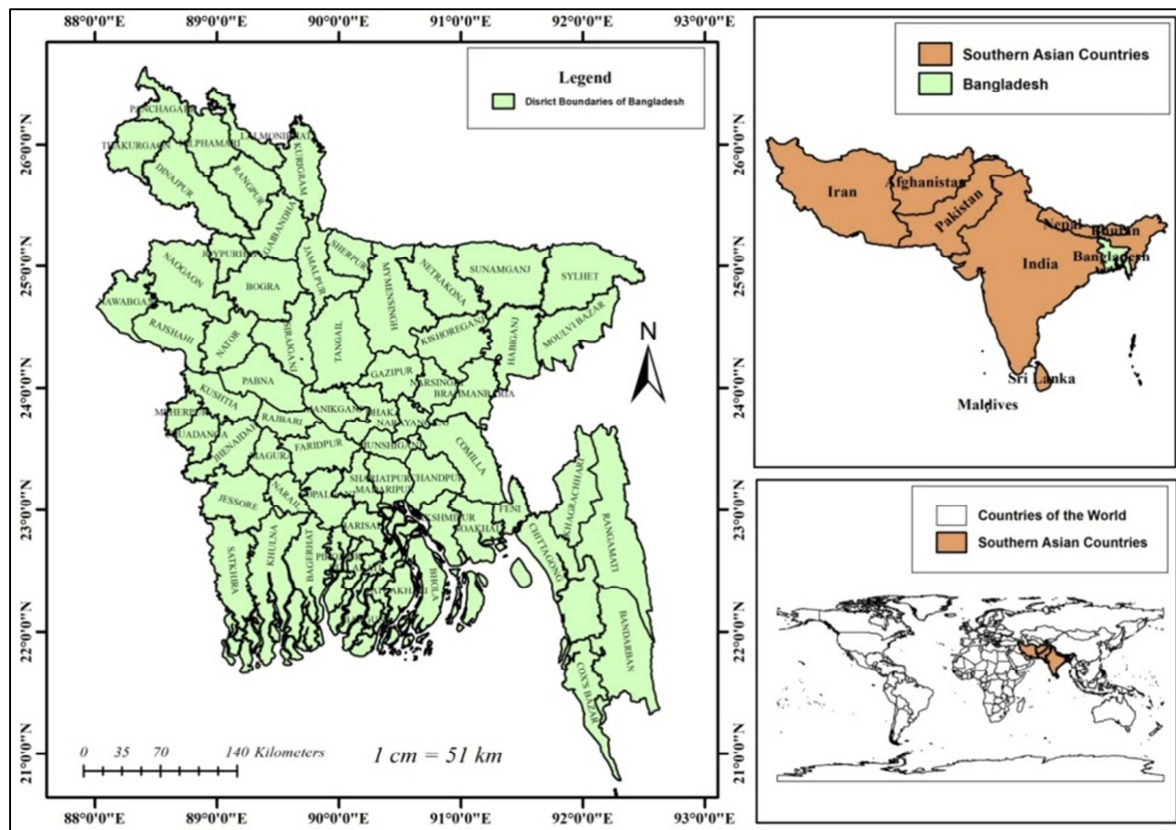


Figure 1. Study Area Map.

2. Methodology

2.1. Description of the Study Area

Bangladesh is a democratic country and also a developing

country. Bangladesh is Located in the north-eastern part of South Asia and is bordered almost entirely by India, except for a small frontier in the southeast with Burma and a coastline along the Bay of Bengal in the south. Geographically this country is located between 20°34' and

26°38' North latitude to 88°01' and 92°41' East longitude [16]. The country covers an area of approximately 147,000 sq. km. (57,000 sq. miles) and extends 820 kilometres (510 mi) north to south and 600 kilometres (370 mi) east to west. Bangladesh is divided into eight administrative divisions, 64 districts, 491 sub-districts, 4,554 sub-sub districts, 58 ministries and divisions, 353 directories [16].

The total populations are 16.17 crores where male are 8.10 crores and female are 8.07 crores and gender ratio is 100.3: 100. The literacy rate of the population is 63.6% [14]. About 86.6% of Bangladeshis are Muslims, followed by Hindus (12.1%), Buddhists (0.6%), Christians (0.4%), and others (0.3%). Population growth rate is 1.37% [14]. Bangladesh is one of the members of the developing 8 and considered as the Next Eleven Economy of the world in 20 coined by Goldman Sachs. Per capita GDP is \$1602, GDP growth rate is 7.24%, and the poverty level is 23.5% [44]. Globally Bangladesh is 8th largest country in the world in terms of population, 7th most densely populated country and the most densely populated country in the world having more than 10 million populations as well as 2nd largest garments exporter in the world [16].

2.2. Data Collection and Analysis Method

The selection of appropriate method highly depends upon the aim of the study. The study consisted of both quantitative and qualitative methods [56]. In this research, the purposive sampling techniques have been used for selecting the sample size. The purposive sampling technique is a type of non-probability sampling that is most effective when one needs to study a certain cultural domain with knowledgeable experts within [52]. In order to collect the quantitative data, an individual face-to-face interview was conducted [49]. A semi-structured questionnaire form was used to collect the data from the sample [40]. The semi-structured interviews consist of several key questions that help to define the areas to be explored, but also allows the interviewer or interviewee to diverge in order to pursue an idea or response in more detail [26]. A total 200 individual interview (who had been directly or indirectly affected by the petrol bomb explosions) was done to fulfill the research purpose. On the other hand, qualitative methods are, for the most part, intended to achieve depth of understanding [53]. The qualitative data has been collected through Focus Group Discussion (FGD) and Key Informants Interview (KII) methods. The Focus Group Discussion was conducted on both male and female. It was helped to gather a wide range of information in a short time [40, 39]. The participants of the FGD have 10 to 12 people who had been affected by petrol bomb explosions. A total 10 FGD was done to gather the information about petrol

bomb explosion. Besides this, 20 KII was conducted among the people who has a great depth of knowledge [48] about the political violence and can offer perceptive information to the researcher relate to the research questions and problem-solving suggestions related to any problem. The key informants were included the journalist, media specialist, government official, non-government official, political leader etc. Secondary data was collected from different kinds of journals, newspapers, government published and unpublished document, magazine etc. Data analysis is an on-going part of data collection [57]. After the completion of data collection, tabulation work including editing, coding and tabulation was done manually. Data computation and analysis has been done by using SPSS version 22 and Microsoft office excel 2010 program. Both inferential and descriptive analysis was performed to describe the findings. Descriptive statistics namely, mean, standard deviation, the coefficient of variation, frequency and percentage distribution have been used to explore the variables. Besides this, one sample t-test was done to compare people perception about the causes of petrol bomb explosions. In addition to, correlation and regression model were followed to find out the results of the objectives.

3. Results and Discussion

3.1. Demographic and Socio-economic Characteristics

A total 200 participants were included in the study. The survey respondents were 76 percent male and 24 percent are female (Table 1). The sampled respondents were relatively middle age group (M=2.74, SD=1.26). Age of the respondents varies from less than 20 years and above 60 years. About 30 percent of the respondents were in middle age group (30-39 years) followed by less than 21 percent of young age group (Table 1). The average personal education level of the respondents was not high (M= 3.46, SD=1.74). Most of the respondents had primary level of education (<30 percent). Majority of respondents were vehicle staff and driver, which accounted for 29.5 percent and 27.5 percent respectively. The rest of the respondents had garments worker, journalist, vehicle owner, students, government and non-government official and accounted for 15 percent, 7.5 percent, 4 percent, 5.5 percent, and 3.5 percent respectively. The economic status of surveyed respondents was not satisfactory (M=2.55, SD=1.22). About 20 percent were stated that their income is more or less fulfil their basic needs. Among the respondents, 149 percent had directly or indirectly experienced the petrol bomb explosions (Table 1). Additionally, more than 65 percent respondents have little knowledge about petrol bomb and its consequences (M=1.51,

SD=.79).

3.2. Reason of Petrol Bomb Explosions

Petrol bomb previously used in the world war, but in recent time petrol bomb is used in Bangladesh for political violence. While reporting the Petrol bomb explosion, newspapers mostly state the immediate reasons for the explosion. The reason mentioned in the newspaper was recorded grouped under board categories and presented in figure 2. According to the figure, during the year of 2008-2012, establishing political dominance was the single largest reason (26 percent) of Petrol bomb explosion. The term political dominance includes incident such as when one party tries to establish control in the central region or institution with the motive of gaining economic benefit, or establishing political control. On the other hand, hartal/oborodh the second largest reason

(20 percent) for petrol bomb explosion, followed by political enmity/conflict (15 percent) Local government election and death, attack or arrest of the political leader are also the major reason behind petrol bomb explosion. Besides this, Bigotry was one of the big reasons for petrol bomb explosion, which account for 11 percent of total explosions. Looking at the causes of explosions during the year of 2013-15, there appears different pattern compared to the previous years. As data shows, among different types of causes, Hartal/aborodh (Strike/Blockade) stood the primary cause of petrol bomb explosions, and account for 36 percent of explosions. Significantly, 13 percent petrol bomb explosions took place due to the establishing political dominance. On the other hand, Bigotry, the death of/attack/arrest of the political leader, and war crime trial went down to 11, 10, and 9 percent on average respectively.

Table 1. Characteristics of the survey participants (n = 200).

Respondents characteristics	Frequency	Percent	Mean	Std. Deviation
Gender				
Male	152	76.0	1.24	.428
Female	48	24.0		
Total	200	100.0		
Age of the respondents				
Less than 20 years	42	21.0	2.74	1.261
20–29 years	43	21.5		
30–39 years	60	30.0		
40–49 years	37	18.5		
50–59 years	16	8.0		
60 years and above	2	1.0		
Total	200	100.0		
Level of Education				
No education	8	4.0	3.46	1.744
Pre-school/primary	65	32.5		
JSC/middle	63	31.5		
SSC or Equivalent	15	7.5		
HSC or Equivalent	9	4.5		
Honours or Equivalent	20	10.0		
Masters or higher	20	10.0		
Total	200	100.0		
Occupation				
Vehicle Driver	55	27.5	3.27	1.997
Vehicle owner	15	7.5		
Vehicle staff	59	29.5		
Journalist	15	7.5		
Garments worker	30	15.0		
Government official	7	3.5		
Non-government official	11	5.5		
Student	8	4.0		
Total	200	100.0		
Economic Status				
Low	45	22.5	2.55	1.226
Medium	63	31.5		
High	46	23.0		
Higher	29	14.5		
Highest	17	8.5		
Total	200	100.0		
Experience of Petrol Bomb Explosions				
Yes	149	74.5	1.25	.436
No	51	25.5		
Total	200	100.0		
Level of Knowledge				
Low	132	66.0	1.51	.769

Respondents characteristics	Frequency	Percent	Mean	Std. Deviation
Medium	34	17.0		
High	34	17.0		
Total	200	100.0		

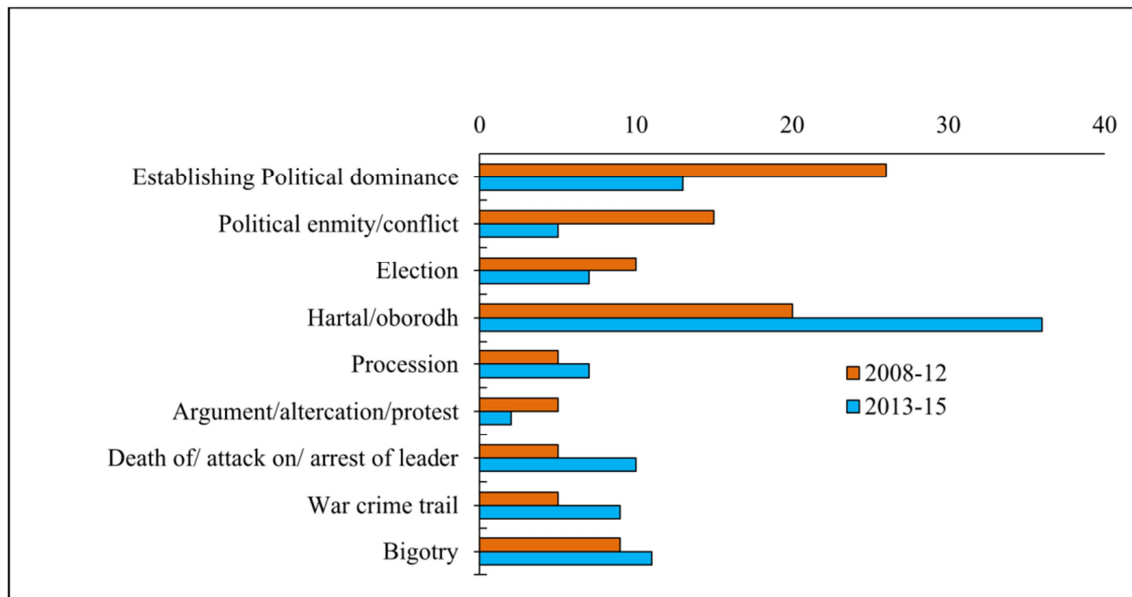


Figure 2. Reason of Petrol Bomb Explosions in Bangladesh (2008-12 & 2013-15).

3.3. People's Perception of Petrol Bomb Explosions

According to the reported causes from the newspaper in the year of 2008-12 and 2013-15, the researchers found out the perception of the people about those causes. So, the researchers have been used Likert's scale to measure the perception. The response continuum for each statement is a linear scale indicating the extent respondents agree or disagree with each statement. For example, a generic response continuum is 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided or Neutral, 4 = Agree, and 5 = Strongly Agree for statements favorable to the construct. Likert's (1932) monograph specifies that the quantification of the construct is a summated score for each individual calculated by summing an individual's responses for each item comprising the scale [41]. Table 2 elaborates the perception of people about the causes of petrol bomb explosions. A one-sample t-test was conducted to test the significance. The level of significance was set at .05. The results of the one-sample t-test (Establishing political dominance is responsible for petrol bomb explosion) indicated a statistically significant difference between the two values, $t = 70.07$, $p = .000$. Of the total 200 respondents, more than 85 percent of respondents agreed or strongly agreed with it, only 8 percent neither agree nor disagree and 4 percent disagree or strongly disagree (Table 2). Similarly, more than 75 percent respondents agreed or strongly agree that the political enmity/conflict is responsible for petrol bomb explosions, while 11.4 percent

were neutral about it and 9 percent disagreed or strongly disagreed (Table 2). The results of the one-sample t-test indicated a statistically significant difference between the two values, $t = 56.25$, $p = .000$. During the election, the use of petrol bomb is increased significantly. On average, 72 percent respondents agreed or strongly agree with it. The results of the one-sample t-test indicated a statistically significant difference between the two values, $t = 52.03$, $p = .000$. Additionally, before and after the election, hartal/aborodh is the common phenomena in this country and last two parliament election in Bangladesh had been used petrol bomb significantly for creating public anxiety. More than 90 percent of respondent reported that they agreed or strongly agreed with it. The results of the one-sample t-test indicated a statistically significant difference between the two values, $t = 77.79$, $p = .000$. On the other hand, half of the respondents agreed or strongly agreed that the death of/attack/arrest of the political leader is the greatest reason for petrol bomb explosions, only 20 percent of respondents disagreed or strongly disagreed about this cause (Table 2). The results of the one-sample t-test indicated a statistically significant difference between the two values, $t = 42.06$, $p = .000$. In addition to, about 80 percent of the respondents agreed or strongly agreed that the war crime trail has been used the petrol bomb while 17 percent of the respondents neither agreed nor disagreed (Table 2). The results of the one-sample t-test indicated a statistically significant difference between the two values, $t = 85.18$, $p = .000$. Besides this, half of the respondents were stated that when the leader of

different party submitted the tender/ encroachment of land has been used petrol bomb for creating fear among another party, but 30 percent of the respondents were neutral about this cause. The results of the one-sample t-test indicated a statistically insignificant difference between the two values, t

$=48.48$, $p = .246$. But more than 60 percent respondents were neutral or disagree or strongly disagree about the bigotry. The results of the one-sample t-test indicated a statistically significant difference between the two values, $t = 39.22$, $p = .000$.

Table 2. People perception about the causes of Petrol Bomb Explosions.

Causes of Petrol Bomb Explosion	Categories	Frequency	Percent	Mean	Std. Deviation	t-test	p-value
Establishing Political Dominance	SD	4	2.0	4.29	0.865	70.07	.000
	DA	4	2.0				
	N	18	9.0				
	A	78	39.0				
	SA	96	48.0				
	Total	200	100.0				
Political Enmity/Conflict	SD	8	4.0	3.89	0.979	56.25	.000
	DA	12	6.0				
	N	23	11.5				
	A	107	53.5				
	SA	50	25.0				
	Total	200	100.0				
Election	SD	9	4.5	3.93	1.068	52.03	.000
	DA	11	5.5				
	N	34	17.0				
	A	77	38.5				
	SA	69	34.5				
	Total	200	100.0				
Hartal/Aborodh	SD	4	2.0	4.20	0.763	77.79	.000
	DA	4	2.0				
	N	6	3.0				
	A	120	60.0				
	SA	66	33.0				
	Total	200	100.0				
Death of/Attack/Arrest of political Leader	SD	12	6.0	3.50	1.194	42.06	.000
	D	32	16.0				
	N	39	19.5				
	A	68	34.0				
	SA	49	24.5				
	Total	200	100.0				
War crime Trial	SD	3	1.5	3.84	0.638	85.18	.000
	DA	2	1.0				
	N	35	17.5				
	A	144	72.0				
	SA	16	8.0				
	Total	200	100.0				
Bigotry	SD	31	15.5	2.89	1.044	39.22	.000
	DA	27	13.5				
	N	74	37.0				
	A	68	34.0				
	SA	0	0				
	Total	200	100.0				
Tender submission/ encroachment of land	SD	7	3.5	3.47	1.012	48.48	.246
	DA	26	13.0				
	N	63	31.5				
	A	74	37.0				
	SA	30	15.0				
	Total	200	100.0				

3.4. Consequences of Petrol Bomb Explosions

Political violence remains inseparable from Bangladeshi politics and election violence is an integral part of that violence. A dominant aspect of the political party-system in Bangladesh is its culture of violence. It has become

commonplace for political parties to often engage in street violence [46]. During the violence most of the time they use petrol bomb which has a significant impact on human life, social as well as economic sector.

3.4.1. Correlation Analysis

Correlation analysis has been carried out to find out the

impact of petrol bomb explosions on different sectors. In this analysis, the dependent variable is petrol bomb explosions. Based on the information collected from the respondents, two dichotomous outcome indicators (1 and 0) were constructed based on whether or not they had affected by the petrol bomb

explosions. Here 1 means yes and 0 represents no. The level of significance was set at .05. The results of correlation analysis indicated that the explosion of petrol bomb has a significant impact on economic ($p=.000$), social ($p=.000$), and health ($p=.000$) sectors (Table 3).

Table 3. Correlation Results.

	Economic Impact	Social Impact	Health Impact
Pearson Correlation	-.545**	-.654**	-.521**
Sig. (2-tailed)	.000	.000	.000
N	200	200	200

** . Significant at the 0.01 level (2-tailed)

* . Significant at the 0.05 level (2-tailed)

3.4.2. Regression Analysis

A simple linear regression was calculated to predict the impact of petrol bomb explosions on economic, social, health, and environmental sector. A significant regression equation was found ($F(4, 195) = 83.342, p<.000$), with an $R^2.631$. Respondents predicted the petrol bomb explosions is equal to 3.168 -.192 (Economic impact) -.165 (Social impact) -.185

(Health impact). The regression coefficient shows petrol bomb explosion has a significant impact on the economic sector ($t = -6.820, p=.000<.01$). So, the hypothesis is accepted. Similarly, petrol bomb explosion has significant impact on the other sector such as social ($t = -7.055, p=.000<.01$), health ($t = -8.262, p=.000<.01$) sector. The results of coefficient of all variable were statistically significant.

Table 4. ANOVA^a.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	23.973	4	5.993	83.342	.000 ^b
Residual	14.022	195	.072		
Total	37.995	199			

Table 5. Coefficients^a.

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	3.168	.122			25.913	.000
Economic Impact	-.192	.028	-.336		-6.820	.000
Social Impact	-.165	.023	-.370		-7.055	.000
Health Impact	-.185	.022	-.452		-8.262	.000

3.4.3. Economic Consequences

Political violence and violent crime have had a very serious impact on the country's economy, as foreign investors are reluctant to invest and local investors are unable to protect their investments [20]. Bangladesh in the recent past has been experienced of domestic political instability caused by hartals, oborodhs, petrol bomb explosion, and deadly violence [10]. As a result, the economy had to bear the brunt in many ways. The study revealed that 85 percent of respondents reported that, due to the explosions Government faces the huge economic loss because the Government different economic sector was suspended (Figure 2). The World Bank International Monetary Fund, Bangladesh Bank (BB) and many experts have projected the gross domestic product (GDP) to be lower than 6%, which is much below the target of 7.2% for FY2014 [37]. On the other hand, about 80% of the respondents were reported that at the time of political violence the industrial sector significantly affected.

The industrial sector has been affected as the products could not be distributed across the country. The exporters could transport their products with much difficulty, not only at higher transport costs but also at high risk of getting them burnt during petrol bomb explosions. Though exports are still showing high performance, buyers of readymade garments (RMG) have alerted Bangladeshi manufacturers about shifting their orders from Bangladesh to other sources such as Cambodia, Vietnam and even India if political violence continues [37]. Any such move will mean unemployment of a large number of workers, who will create pressure on the already pressured economy in terms of employment generation capacity. This will also create social problems as a majority of RMG workers are women who have been empowered through economic independence by way of working in the RMG sector. Many employees who lost their jobs have returned to their villages in search of work while others are haunted by the fear of uncertain future in cities [42]. A large section of the low-income group, such as

workers in hotels, restaurants, shops, transport sector and the like, rickshaw pullers and day labourers have suffered the huge loss of income. More than 95 percent of the respondents were stated that the uncertainty has created more unemployment condition (Figure 2). On the whole, political unrest has affected the production process both directly and indirectly. The direct impact is through lower economic activity and indirect effect is through disruption of various channels and means of production. With the political unrest cooling down gradually, many economic activities have

started to get back on track. However, it will take some time and require high expenditures to get some of the damaged establishments functioning. All the effects of political unrest on the economy are in fact intertwined as they all lead to lower economic growth that leads to high unemployment, high-income erosion and high poverty. If such a situation persists for a long period it can give rise to social problems as well. More than 75 percent of respondents stated that as a result of petrol bomb explosions Bangladesh losses much foreign currency (Figure 3).

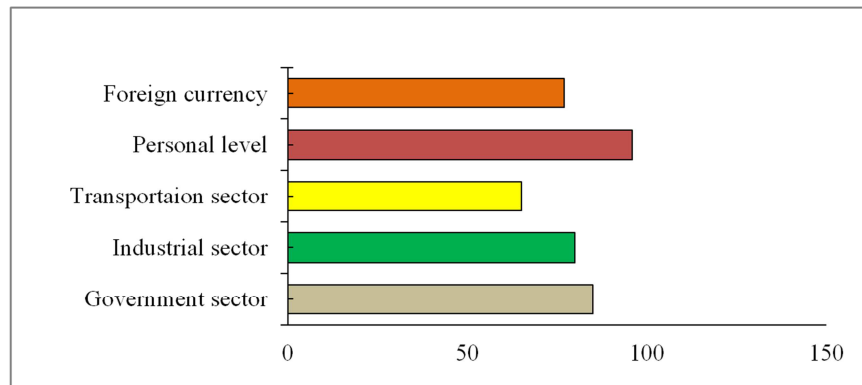


Figure 3. Economic consequences of petrol bomb explosions.

3.4.4. Social Consequences

Periods of political instability creates poisonous atmosphere wherein dissident individuals or minority communities fear violence and an uncertain future [8]. About 73 percent of the respondents were mentioned that during the political unrest situation they have faced anxiety and uncertainties. On the other hand, public and private properties have been wrecked; rail lines have been uprooted; train carriages and vehicles have been torched. As a result, the poor people have lost their income source and normal life activities have been disrupted. More than 85 percent respondents stated that due to the unemployment situation during the violence, the criminal activities have been increased significantly (Figure 4). Besides

this, the education system has also played an important role in the changing of social structure. The current political situation in Bangladesh has adversely affected the academic environment in almost all academic institution. The students as well as the teachers have to face a lot of uncertainties and mental stress. Students are most affected because they are among the most vulnerable groups affected by the political extreme violence [19]. During the time of political violence, guardians are worried about the safety of their children or wards; they do not send their children or wards to schools, colleges or universities. According to the figure 4, more than half of the respondents were stated that during the political violence hampered their children education.

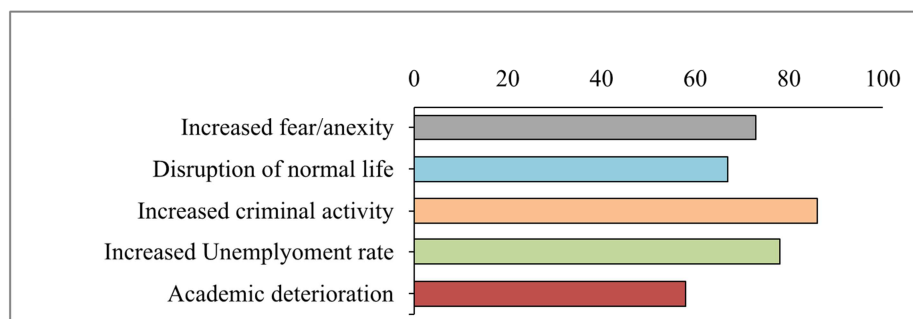


Figure 4. Social consequences of petrol bomb explosions.

3.4.5. Health Related Consequences

The main consequences of petrol bomb explosions are related to the health. In the study, the researchers found those who

have experienced petrol bomb explosion directly or indirectly as well as political violence in their lifetime were two or four times more likely to suffer physical or mental health

problems. According to information gathered by Odhikar, during the year of 2001 to 2014 a total 4,320 people were killed and 1, 75, 018 people were injured due to political violence (Odhikar, 2016). Most of the people were killed because of direct effect of petrol bomb explosion. Besides this, most of them were burnt in petrol bomb and arson attacks during hartals and blockade programmes. The bar chart (Figure 5) provides information about the percentage of health related consequences due to petrol bomb explosions. According to the figure 5; about 98 percent respondents reported that, burn injury is the main consequences of the

explosions. On the other hand, more than 85 percent respondents stated that the death is the result of violent explosions. In addition to, more than 75 percent respondents stated that the survivors of petrol bomb explosions had symptoms of post-traumatic stress disorder (PTSD). Besides this, 65 percent respondents stated that when petrol bomb explosions occur some people death reason only suffocation problem on the other hand many affected people faces long time suffocation problem after the explosions. About 58 percent respondents reported who are affected by petrol bomb explosions has faced psychological trauma (Figure 5).

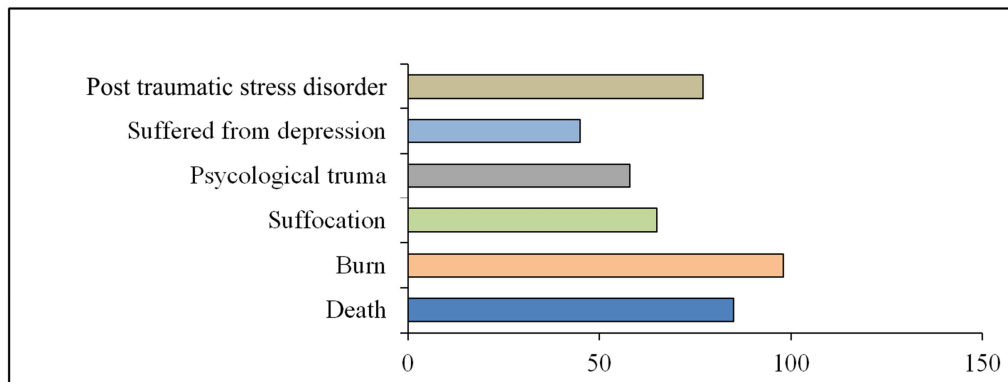


Figure 5. Health related consequence of petrol bomb explosions.

3.5. Solutions Petrol Bomb Explosions in Bangladesh

The weak condition of electoral administration and election process has a strong bearing of political violence. The political causes of violence are mainly the result of intolerance, political instability, personal rivalry among political leaders and activists, criminalization of politics, and ideological indoctrination by religious groups and ultra-leftist elements [20]. In the recent past during the political violence, the use of petrol bomb has been increased significantly. The situation is alarming and needs serious and urgent attention. The state must introduce measures to reform the judicial and police administration system. Administrative and political devolution of power and authority must occur to make the police and judicial system responsible, transparent and accountable [63]. In order to stabilize the political system must have established formal inter-party dialogue before the election between the major political parties. Moreover, should be established and publicized an agreement on expected electoral conduct in such ways to protect electoral fairness and prevent fraud or intimidation as well as stronger local monitoring of election related violence. Furthermore, ensure the protection of democratic space for opposition parties and civil society as well as promote accountability for members of the security forces. On the other hand, the international community will promote political negotiations and the setting of acceptable election standards [25] and

encourage investigations and prosecutions of members of the security forces and others for the implication of human rights violations. Besides this, provide UN country team and embassy staff with atrocity prevention training which will help to identify early warning signs of mass atrocities and an understanding of the potential appropriate responses to those signs. Additionally, an international election monitoring system [50, 18, 11] should be established which not only provides helpful documentation of election processes but also monitor election related violence. Besides, a community-based initiative should be established to identify early warning signs of mass violence and develop effective response systems. Also, the international development and donor community can support initiatives undertaken by civil society organizations [62] to promote nonviolence at the local level. Potential forms of assistance include funding projects that promote the respect for the rule of law, counter hate speech, reduce group-targeted hatred and violence, and monitor election-related violence.

4. Conclusion

The research was conducted to explore the consequences of petrol bomb explosion in Bangladesh and suggest probable solutions to reduce its effect. Studies revealed that the Hartal/Aborodh (Strike/Blockade), the establishment of political dominance, political enmity/conflict were the major

cause of petrol bomb explosion which was reported in the various newspaper. Based on the perception of respondents, 93 percent was strongly agreed or agreed that the Hartal/ Aborodh (Strike/Blockade) is the major cause of petrol bomb explosions. Similarly, more than 80 percent was agreed or strongly agreed about the establishment of political dominance and war crime trial. It has been clear that political instability was the main cause of petrol bomb explosions and study revealed that it has a significant impact on economic, social and health sector. About 96 percent respondents were reported that the economic impact mainly resultant on the individual level because most of them had lost the income sources. Additionally, Government has faced a huge economic crisis due to damage of economic sector. The industrial sector is significantly affected because products could not be distributed across the country or abroad. Studies indicated that most of the poor people have lost their income source and normal life activities. As a result, criminal activities criminal activities were increased significantly. Besides this, finding revealed that explosions were created fear or anxiety within the civilian as well as hampered the education sector. This study also shown that petrol bomb explosions mainly impacted on the health. It had been found that 98 percent people were reported the burnt injured and 85 percent was stated that the death. In addition to, more than 75 percent respondents stated that the survivors of petrol bomb explosions had symptoms of post-traumatic stress disorder (PTSD). Therefore, the establishment of the stable political system, publicly accepted parliament election, strong national and international election monitoring procedure will help to reduce the political violence and mitigate the petrol bomb explosions. The findings from this study will help the researchers and policymakers to design and implement appropriate policy and strategies for reducing the consequence of petrol bomb explosions.

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