

Spatio-Temporal Pattern of Crimes –An Analysis on Social Hazards – Krishnagar Municipality, Krishnagar, Nadia, West Bengal

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Abstract:

Criminal activities especially in urban areas all throughout the world getting worse situation day by day. In the developing countries like India it is now in grave situation. Here in this work, Krishnagar Municipal area has been selected as the study area because it is evident that KUA is highly vulnerable to all types of crime due to high population density and high population pressure in unorganized sectors, mixed population composition and economic disparity in this area. Varied types of violent, economic and property crimes are recorded in this area. drug trafficking, gunrunning, money laundering and extortion, murder for hire, fraud, human trafficking, Child trafficking, Modern Slavery, illegal use of arms and explosives, poaching and prostitution deserve special mention. The crux of the study is to unfold the spatio-temporal pattern of the crimes in the studied area. For this purpose both primary and secondary data have been employed to draw the inferences of the study. The causes of crime in the study area have also been dynamic and are changing nature in terms of spatio-temporal aspects. Reasons for committing a crime in the studied area include greed, anger, jealousy, revenge, or pride. Unemployment, Poverty, Lack of proper education and effective employment are major concern. However, KMA is most vulnerable in criminal activities and holistic strategy should be taken for combating the grave situation.

Key Words: economic disparity, crime and violence, Property crimes, Violent crimes, Teenage criminals, Crime abroad,

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I. Introduction:

Crimes and criminal activities especially in urban areas, manifold crimes and violence constitute serious impediment to economic and social development in global, national, regional and local level. In many urban centers all throughout the world, high rates of crime and violence are undermining growth, threatening human wellbeing and discouraging and degrading social development. Crimes in national and local level are of various forms in different states in India. *It includes drug trafficking, gunrunning, money laundering and extortion, murder for hire, fraud, human trafficking, Child trafficking, Modern Slavery, illegal use of arms and explosives, poaching and prostitution etc.* Many criminal operations engage in black marketeering, political violence, religiously motivated violence, terrorism, and abduction. Other crimes are homicide, robbery, assault etc. Property crimes includes burglary, theft, motor vehicle theft, and arson. Corruption in various sectors is also a significant crime. Urbanization characterizes development and inter-alia involves intense economic and industrial activities. At the same time, urbanization influenced by the accelerated population growth, uneven and intense migration, invite unorganized settlements. lack of opportunities, uneven distribution of incomes, diverse socio-religious-cultural disparities make urban areas spheres of increased criminal activities. Organized groups viz. gangsters, professional criminals, new entrants, youths, juveniles, find crime a thriving vocation as a short cut for an easy and good living in urban environment. Crime is the breach of rules or laws for which some governing authority can ultimately prescribe a conviction. Crimes may also result in cautions, rehabilitation, or be unenforced. Different human societies usually define crimes differently according to its nature of movement, in different localities, and at different time and stages of the crime while every crime violates the law, not every violation of the law counts as a crime certainly. *Modern societies generally regard crimes as offenses against the public or the state, as distinguished from torts, which are wrongs against private parties that can give rise to a civil cause of action.*

In particular, as economic growth and development of countries increase, in general, from one year to another, it is expected that crime rate should decline over time. However, it does not decline, and it has become more important in the second half of this century. As Becker (1968) pointed out years ago that “Crime has

probably become more important during the last forty years”. Every society has its own values system. Crime is defined by mainly these values system. For one reason or the other, there has been crime in every society throughout history though the rate, type, cause, and effect on each society might be highly different.

In criminal law, an offense against the person usually refers to a crime which is committed by direct physical harm or force being applied to another person. They are usually analyzed by division into fatal offenses, sexual offenses, or non-fatal non-sexual offenses. **A violent crime is a crime in which the offender uses or threatens to use violent force upon the victim. Violent crimes include crimes committed with and without weapons.** They also include both crimes in which the violent act is the objective, such as murder, as well as crimes in which violence is the means to an end, such as robbery. **Crime can generally be broken down into 2 categories – violent and nonviolent. Violent crimes involve harm to another person, generally done intentionally. The seriousness of the crime is determined by the amount of harm; use of a weapon also increases the seriousness. By contrast, nonviolent crime involves harm to property and/or possessions. Fraud or certain drug charges are examples of nonviolent crimes. Juvenile delinquency is participation in illegal behavior by minors.** A juvenile delinquent is a person who is typically under the age of 18 and commits an act that would have otherwise been charged as a crime if the minor was an adult. Depending on the type and severity of the offense committed, it is possible for persons under 18 to be charged and tried as adults.

Study Area:

West Bengal has long international boundary line which is most vulnerable in relation to criminal activities. North Twenty-Four Parganas, Nadia, Jalpaiguri, Kuchbihar are mostly notable in this regard. **Here I have selected the Krishnagar Municipality for the present form of study, as it has specific spatial characteristics for the present purpose of analysis.** Krishnagar Municipality is not only the district head quarter of Nadia but very close to India-Bangladesh border. It is situated on the left bank of the river Jalangi and its exact location is 23° 24" N and 88° 31" E (Map No. 1.1). A large number of floating population, Cosmopolitan character of population and almost changing nature of migrants (almost daily) are common causes for varied nature of criminal activities in Krishnagar Municipal Town. The area of Krishnagar Municipality is 15.96 sq. km. and has twenty four wards and also has large number of pockets with criminal activities. The total population of Krishnagar Municipality as per 2011 census is 152115 and the urban area is under sadar Police Station. This area has various criminal activities since long and accelerating trend of population explosion and immigration have considerable role for the increasing criminal activities in this area.

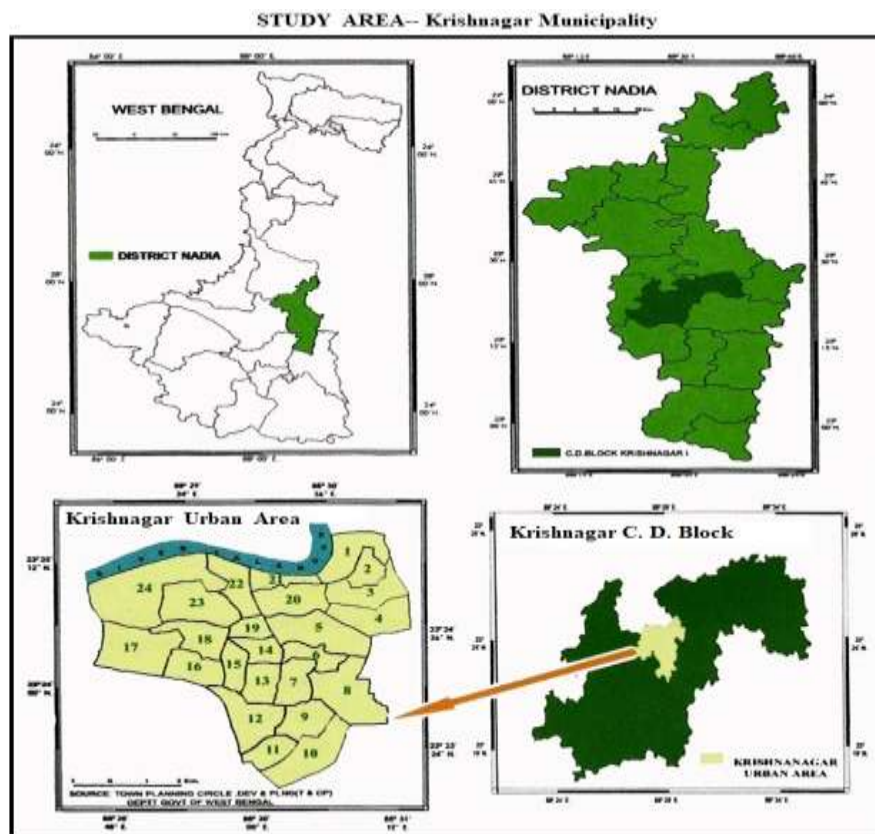


Fig. No. 01—Study Area

Objectives of the Study:

Criminal offence related activities are now major issues in any region especially in cosmopolitan urban areas like Krishnagar. It is an age old urban centre and also facing major criminal activities since long. Those are very and varied. **The major objectives of the present study are:**

1. *To study the nature and types of crime that took place in Krishnagar urban area, especially in recent perspective with respect to spatio-temporal direction.*
2. *To study the spatio-temporal nature and types of crime in Krishnanagar urban area with respect to age-sex distribution of crime.*
3. *Ward wise Identification of crime of the Krishnanagar Municipal area and its nature*
4. *To identify the types of crime in the study area.*
5. *To search for factors contributing to crime in the area.*
6. *To analyses the causes and put forward measures that can be taken to mitigate this problem.*

Database and Methodology:

It is very difficult to collect data of such aspects like criminal activities. Everyday varied criminal activities are happening due to various causes and it is very tough to record all those legally. Still necessary data have been collected from different sources. Sample data have been collected through primary sources and mostly data have been collected from secondary sources especially from govt. record. Various govt. offices help me in various ways.

All required secondary data which have been used to give a structure to this paper are being collected from the office of the Superintendent of Police, Krishnanagar, Nadia and also have been used census data 2011 and Crime in India 2011 Statistics published by N.C.R.B. Ministry of Home Affairs.

Primary data have been collected by the process of direct personal investigation through questionnaire survey from the inmates, their family members & the officers of District Correctional Home, Krishnanagar, Nadia. Moreover, e-mail, personal letter communication and information from close relatives deserve special mention.

In the primary stage base map preparation, data collection by door to door survey, Tabulation have been done. Then processing of data for the fulfillment of objectives has been performed applying modern methods; then presentation and analysis have been done applying the GIS tools. Finally inferences have been taken into consideration.

II. RESULTS AND DISCUSSION:

Variables, Causes and Types of Crime in The Study Area:

Crime spares no continent, country, state, city, village or street. *Crime is a concept that exists along with the creation of mankind. It is an act or omission of an act which causes harm to the society as a whole and causes disturbance and panic in the society. Such an act is punishable by the criminal laws.* Over the ages, the amount and types of crimes changed and to deal with them appropriate laws has been made. Now crime can even take place in the virtual world and can make the same type of impact in the society. The techniques and methods of committing crime have changed and so has the factors that cause crime.

Table No.-- 01-- Population Characteristics of Krishnagar Municipal Town (2016)

Parameters	Persons	Male	Female
Total Population	152115	76612	75503
SC Population	23173	11917	11256
ST Population	449	234	215
Literacy Rate	85%	86%	83%
Working Population	45824 (30.12%)	37956 (83%)	7868 (17%)
Sex Ratio	985	---	-----

Source--DCH, 2016

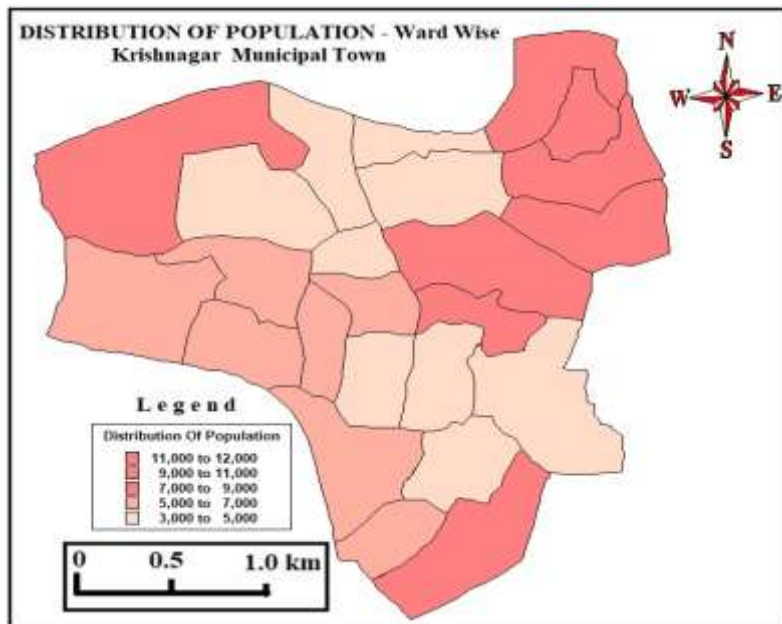


Fig – 02- Distribution of Population

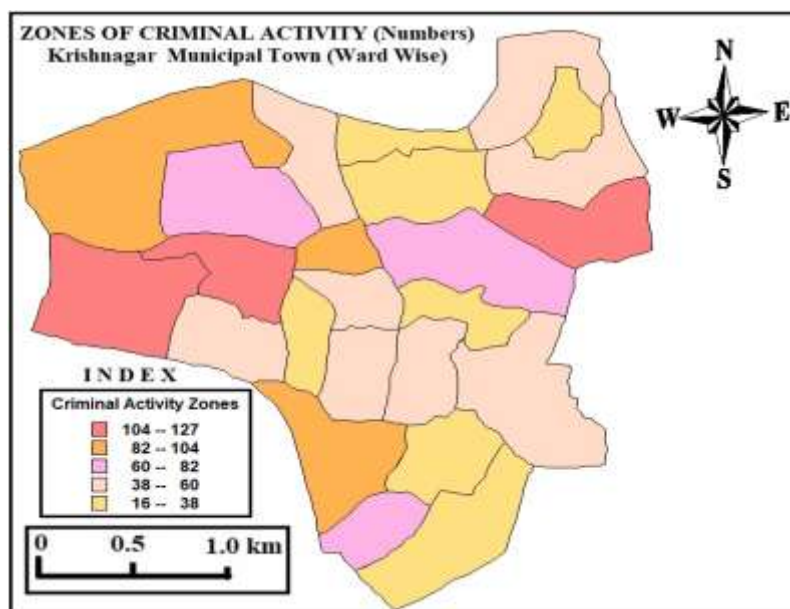


Fig. – 03-(Number of Criminal Activities)

Nature of Population, its character and the socio-economic set-up are mostly responsible for the organized and unorganized sets of crimes. Those are –uneven distribution and growth of population, high density, nature of literacy, varied composition of population, sex ratio, composition of SC and ST population, working population status, work participation rate and nature of floating population deserve special mention.

There are number of variables which are particularly enforcing different types of crime. Some are dependent and some are independent variables. Most significant *dependent variable* is known as property crime. *Serious violent crimes* which includes murder and nonegigent manslaughter, forcible rape, robbery and aggravated assault. Commonly agreed three sets of variables are recorded in determining the nature and character of crimes. Those are economic, socio-economic-demographic, and the deterrent variables (Gaviria and Pagés, 2002, Mathur, 1977, Stevans, 1983, Meera and Jayakumar, 1995, and Masih and Masih, 1996).

Economic variables can be Income Inequality Index (IIEQ), the median income of families, the unemployment rate, per capita city income etc. Each of them can have some impact on the crime rate. **It has also been assigned that accelerating rate of unemployment and unemployed youth in the city increase the crime rate.** There are also positive relationship between crime and income inequality.

Socio-economic-demographic variables that determine crime would be educational level, age structure of the city, level of urbanization, percentage of certain race in the society, percentage of population who are male, or female in the labor force etc. One can expect a negative relationship between educational level in a society and crime. The higher the educational level of the members of a society, the less likely the crime to be committed among the members of the society.

Masih and Masih state “At low levels of urbanization, crime may be high because of sparsely located residents; a further increase in urbanization may lead to decrease in crime because of closer proximity of residents; and finally, with even further increase in urbanization, crime may rise because individuals may not identify whether they are engaged in a legal or illegal activity” (1093).

But, How do some people decide to commit a crime? This is now a hanging and undecided question in the present society in the study area. By the twenty-first century criminologists looked to a wide range of factors to explain why a person would commit crimes. *These included biological, psychological, social, and economic factors. Usually a combination of these factors is behind a person who commits a crime.*

Reasons for committing a crime in the studied area include greed, anger, jealousy, revenge, or pride. Some people decide to commit a crime and carefully plan everything in advance to increase gain and decrease risk. These people are making choices about their behavior; some even consider a life of crime better than a regular job—believing crime brings in greater rewards, admiration, and excitement—at least until they are caught. Others get an adrenaline rush when successfully carrying out a dangerous crime. Others commit crimes on impulse, out of rage or fear.

The causes of crime in the study area have also been dynamic and are changing nature in terms of spatio-temporal aspects. The causes of crime in the same region can differ due to various reasons. It is said that occurrence of crime in India is more than the crime originating in the developed countries. Also few of the religious practices are now termed as criminal activities. Hence, investigation done in order to find out causes can prove that the factors that cause crimes can be for religious reasons, biological reasons, economic instability, lack of education, poverty, in search of power, misleading and provocation etc. **In the study area of Krishnagar Municipal town a number of factors and causes are responsible for the varied types of crime. Those are –**

- a) **Long unrestricted and unprotected district boundary** close to the Krishnagar area;
- b) **Lack of proper education** especially value education and due to such reason people have general trend to fall in the trap of criminal activities;
- c) **Unemployment, seasonal employment and under employment** are the major causes of criminalization in the society. Lack of effective employment oriented training and proper monitoring from the childhood actually attracting the adult for criminal trap easily. Only bookish knowledge and lack of skilled knowledge also causing harm to the adult in the society.
- d) **Ineffective and inadequate legal system** also the cause of accelerating growth of the criminal activities.
- e) **Poverty and massive increase of unemployment within the educated group** are the major causes of increasing criminal activities. Those educated unemployed youths are gradually involving in the high level criminal activities. Poverty is a true evil for the society as it gives rise to not one but a large number of problems.
- f) **Accelerating increase of the use of alcohol and drugs** are also the crux of criminal activities in the society. Even after multiple restrictions, people still get their hands on alcohol and various kinds of drugs. Underage drinking is common phenomenon nowadays. The youth who got addicted to drugs gets involved in illicit selling and buying of drugs. These items make people lose their sense of rationality and hence a lot of crimes are committed under the influence of alcohol and drugs. These are also giving rise to a number of different crimes such as drinking and driving, domestic violence, murder etc.

Internet as well as unrestricted and destructive digital games, Lack of Parental support, Television, Mobiles, PC games, Low self esteem, peer pressure, Religion, Family conditions, uneven composition of the society and political involvement in all respect and several other reasons are responsible for the increase of teenage criminals in the Krishnagar municipality.

Crimes are of very and varied in the Krishnagar areas. Crimes can be generally separated into four categories: **felonies, misdemeanors, inchoate offenses, and strict liability offenses. However, in the study area we can categorize the crimes in the following manner.**

In Krishnagar city various urban crimes are reported and recorded in Two broad categories –

- a) **Crimes identified under Indian Penal Code (IPC)** and b) **The crimes identified under the special and local laws.** Under the first group the various crimes are --

1. Violent crimes-- i) Crime against life ; namely Murder ; its attempt and culpable homicide not amounting to murder, its attempt, **ii)** Kidnapping & abduction, Rape, Molestation, Sexual Harassment, Dowry Deaths and Torture of women grouped as Crime Against Women, **iii)** Riot, **iv)** Arson, **v)** Grievous Hurt.

2. Property crimes-- i) Crime against property accompanied by violence, namely attempt of Dacoity, **ii)** Robbery, its attempt, **iii)** Other crimes against property, namely Burglary and Thefts of various types

3. Economic crimes-- i) Criminal Breach of Trust, Cheating, Counterfeiting.

In addition to that numbers of crime are always recorded in the study area here and there. Those are – *Anti social behaviour* is when you feel intimidated or distressed by a person's behaviour towards any person, *Arson* is when someone deliberately sets fire to someone else's property to damage it or to injure *people*, *Burglary*, when someone breaks into a building with the intention of stealing, hurting someone or committing unlawful damage, *Child abuse* can happen in different ways, and can include neglect as well as physical, emotional and sexual abuse, *Crime abroad* covers any criminal offence that happens to you while outside , *The term cyber crime* refers to a variety of crimes carried out online, *Domestic abuse* describes negative behaviours that one person exhibits over another within families or relationships. *Fraud* is when someone tricks or deceives you to gain a dishonest advantage, *Hate crime* is the term used to describe an incident or crime against someone based on a part of their identity.

Modern Slavery is a serious and often hidden crime. It comprises slavery, servitude, forced and compulsory labour and human trafficking, which is the harbouring and transportation of individuals for exploitation. *Moreover in the study area more number of crimes are recorded time and again.* Those are -- *Murder or manslaughter, Rape and sexual assault, Robbery, Sexual Harassment, Stalking and harassment, Terrorism, Crimes related to arms & explosives, Drug offences/Trafficking, Gambling offences, Offences related to Essential Commodities, Foreigners' Registration & passport offences, Immoral trafficking, Crime in Art & treasurers/Cultural Objects, Dowry prohibition, Child Marriage, Copyright, Indecent representation of women, Environmental crimes etc.*

Table No.—02-- Different Types of (Violent) Crimes – A Comparative Analysis (2016)

Country/Area	Murder	Attempt to Murder	Kidnapping and Abduction	Dacoity	Attempt to Dacoity	Riot(s)	Rape (%)
India	19	17	25	03	02	37	13
West Bengal	14	15	27	02	06	39	09
KUA	03	05	63	03	08	20	05

Table No.—03-- Educational Status of The Family of Inmates-- Krishnagar Town(KUA)

Stages of Education of Family Members	Educational Status of Their Family Members (%)			Occurrences of Crime(s) (%)		
	Total	Male	Female	Total	Male	Female
Illiterate	29.30	24	34	36.36	24	35
Up to Class V	25.58	29	23	14.54	29	23
Up to Class VIII	26.51	31	23	10.91	31	23
Up to M.P.	7.91	07	09	9.09	07	09
Up to H.S.	8.37	08	09	12.73	08	09
Up to Graduation	2.33	02	03	14.54	02	03

Table No.—04--Educational Status of The Inmates-- Krishnagar Town(KUA)

Educational Status Of The Inmates	Criminal Occurrences In %
Illiterate	36.36
Up to Class V	14.54
Up to Class Viii	10.91
Up to M.P.	9.09
Up to H.S.	12.73
Up to Graduation	14.54

Source--N.C.R.B. Ministry of Home Affairs and Secondary data, collected from the office of The Superintendent of Police, Nadia

Table No.—05--Ward wise Population and Occurrences of Crimes (2016)

Word No.	Total Population (2011)	Total Crime
1	8154	46 (3.09%)
2	7074	16 (1.08%)
3	8287	49 (3.30%)
4	9000	126 (8.48%)
5	10672	69 (4.64%)
6	7414	28 (1.88%)
7	4974	49 (3.30%)
8	3992	39 (2.62%)
9	4852	27 (1.82%)
10	8184	23 (1.55%)
11	5048	62 (4.17%)
12	6745	96 (6.46%)
13	4977	56 (3.77%)
14	5366	42 (2.83%)
15	5051	36 (2.42%)
16	5960	39 (2.62%)
17	6629	127 (8.55%)
18	6120	126 (8.48%)
19	4714	94 (6.33%)
20	3500	41 (2.76%)
21	4198	39 (2.62%)
22	4664	59 (3.97%)
23	4800	101 (6.80%)
24	11740	96 (6.46%)
Total 24	152115	1486

(Digits in the parentheses are (%) of Total Crimes

Source--N.C.R.B. Ministry of Home Affairs and Secondary data, collected from the office of The Superintendent of Police, Nadia

Spatio-Temporal Pattern of Crime in The area Studied :

The pattern of urban crime in the Krishnagar Town is very and varied in different places. In different wards most of them are socio-economic and property crimes. Some are also violent as it displayed long range of international boundary. These are caused by various conditions like economic condition, educational status, unemployment, administrative flaws etc. It has also been observed that peripheral wards of Krishnagar are more prone to criminal activities than core areas of Krishnagar. It has been observed that 4, 11, 12, 17, 18, 19, 21, 23, 24 representing higher rate of criminal activities

This spatial disparity in the occurrences of crime is basically due to lack of security at the peripheral wards and infiltration of outsiders into these areas. Due to high priority protection core area has comparatively low rate of criminal activity. Far from the locality and markets gathering of criminals are more frequent and varied criminal activities are occurred in those areas.

For the year 2016 the spatiality in crime pattern is almost similar to that of 2012. In the peripheral wards criminal activities are higher than the CBD area. It has also been clear from the map that in 2012 in almost all the wards criminal activities were alarming. The spatial pattern of crime has been highlighted and (Table No.— 02) different types of violent crime like murder, attempt to commit murder, kidnapping and abduction, dacoity, preparation and assembly for dacoity and riot have been shown for three different places namely all India level, West Bengal and Krishnagar urban area. As per 2014 data regarding these violent crime Krishnagar urban area is below the national state level for the parameters of murder, attempt to commit murder and dacoity and above the national and state level for the parameter of kidnapping and abduction, preparation and assembly for dacoity and riot but kidnapping in Krishnagar has greatly exceeded the national and state level figure. This abnormally high rate of kidnapping in Krishnagar is due to security lack in the border area. Notwithstanding that a considerable number of wards are highly prone to criminal activities. In Krishnagar urban area it has been observed that kidnapping is a considerable criminal activity which is higher than state level but lower than national level. So, the girl child and females are more vulnerable in the study area. (Fig. no.-04).

Regarding crime against women three major types of crime are notable namely rape, cruelty by husband and relatives and kidnapping for all the spatial scale i.e. national level, state level and the study area. Cruelty by husband and relatives are also noteworthy to mention.(Table No.-06). For Krishnagar it is above 80% and for national level it is 50% and state level above 70%. So it is clear that in Krishnagar cruelty by husband and relatives is another major threat to the women. This may be due to the cosmopolitan urban structure in the study area.

Table – 06—Crime Pattern Against Women (2016)—Krishnagar Town(KUA)

@@-- KUA – Krishnagar Urban Area Source-- N.C.R.B. Ministry of Home Affairs and Secondary data,

Country/ Area	Rape(%)	Cruelty By Husband And Relatives	Kidnapping
All India	12.54%	51.34%	36.12%
West Bengal	8.66%	72.42%	18.92%
KUA	4.76%	81.75%	13.49%

collected from the office of The Superintendent of Police, Nadia.

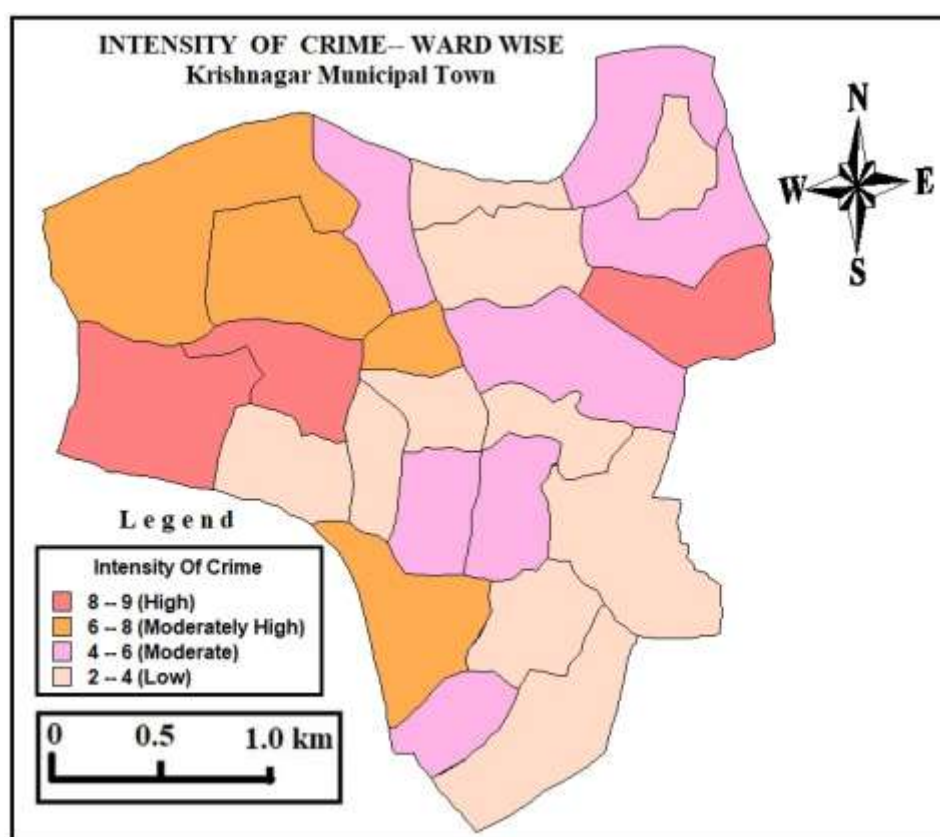


Fig. No. – 04- (Intensity of Crimes)

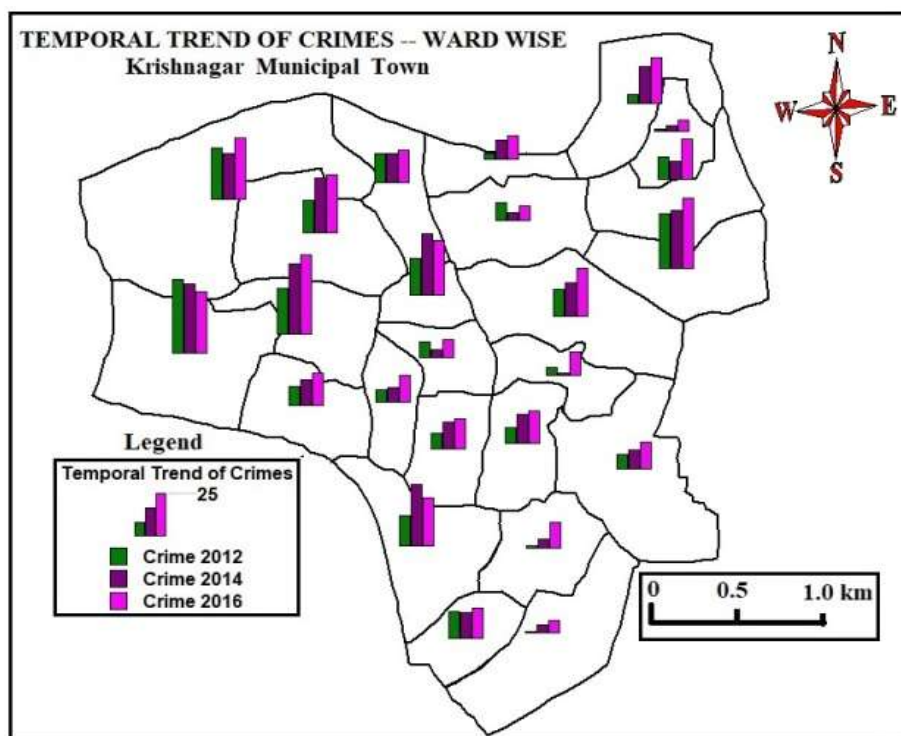


Fig No. -- 05

Table No. – 07--Temporal Trend of Crimes—Krishnagar Town—Ward Wise

Ward No.	Total No. Of Crime		
	2012	2014	2016
1	6	22	12
2	2	4	2
3	13	11	20
4	32	34	35
5	16	20	23
6	5	2	11
7	10	17	13
8	9	12	8
9	2	6	9
10	1	5	7
11	16	15	11
12	18	36	22
13	10	16	12
14	10	5	7
15	8	9	10
16	12	15	5
17	43	40	24
18	27	41	38
19	22	36	16
20	11	5	5
21	4	12	4
22	17	17	16
23	19	32	29
24	30	27	27
TOTAL	341	439	363

In the depth analysis of the trend of crime pattern highlighted that ward nos. 8, 11, 14, 16, 17, 19, 20, 22 and 24 have registered negative growth rate regarding crime. Except these wards all other wards have shown increasing trend (2012-2016). It is interesting to note that in peripheral wards criminal activities have slightly decreased because of the enhancement of security. But in generally the crime has increased because of the social disorganization, mental disability, family breakdown, inhospitality, alienation etc. So, only the administrative restructuring and enhancement of security cannot ensure guarantee a lower crime rate, because most of the crimes of this area are originated from household affairs. So, administration and lack of security are not the sole causes of these crimes rather personal and anomalous social structure have major role in this regard. From the (Table No. -07) it is observed that in the year 2012, total no. of crime was 341 and in 2014 and 2016 it was 439 and 363 respectively. So the crime rate was increased in 2014. In 2014 though the crime rate was decreased, it was higher than 2010. So it has been assigned that the rate of criminal activities are increasing day by day. (Fig.No.—05)

Major Findings

In the present research critical pattern and nature of criminal activities are explained for depicting the spatio-temporal trend. Through the extensive survey in the study area by primary and secondary observation methods, representation, analyses and interpretation have been done of the surveyed data related to the urban crime of Krishnagar Municipal area, which are highlighting the following findings.

- 1) peripheral wards of Krishnagar are more prone to criminal activities than core areas of Krishnagar Town because of their complex socio-economic structure and population composition.
- 2) Information regarding violent crime, (murder, attempt to murder, kidnapping and abduction, dacoity, preparation and assembly for dacoity and riot) in Krishnagar urban area is below the national and state level for the parameters of murder, attempt to commit murder and dacoity and above the national and state level for the parameter of kidnapping and abduction, preparation and assembly for dacoity and riot but kidnapping in Krishnagar has greatly exceeded the national and state level figure.
- 3) The in-depth analyses of crime pattern shows for the ward nos. 8, 11, 14, 16, 17, 19, 20, 22 and 24 have registered lowering in crime rate. The other wards show increasing trend for the stated period of time. (Table No. -07)
- 4) The major crimes found in the study area are cruelty by husbands and his relatives, assault and theft.
- 5) Major factor behind crime in the study area is economic condition and the other factors are low literacy rate, unorganized occupational pattern, age-sex structure, family structure etc.

However, the nature and pattern of urban crime in KMA is increasing and changing day by day which needs effective and free planned strategy. Local clubs, Citizen Forum, young brigade in each ward, women awareness groups etc. should be mobilized to tackle the problem from grass route level. The state administration too must coordinate these groups to tackle the critical situation in this old and heritage city. Awareness program regarding the bad impact of criminal activities on society and economy should also be implanted for combating the worse situation.

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