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## Using Smart Applications to Combat Neighbourhood Gangs in Urban Regions: My City Application; as a Digital Model

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### Abstract:

Recently, there has been an increasing emergence of urban neighbourhoods in Algeria because of the successive housing programs to mitigate the housing crisis and its threats to societal security. However, these neighbourhoods have been accompanied by the rise of criminal organizations as neighbourhood gangs. The latter needs a specific and modern way of dealing that goes in line with the developments in the Algerian social fabric and the shift of its individuals' lifestyles. This is especially with the widespread use of information and communication technologies across all types and levels of society. This variable presents both challenges and solutions for the security institutions. Therefore, this idea will thoroughly be explored in this research work.

**Keywords:** information and communication technologies, neighbourhood gangs, urban neighbourhoods.

### Introduction

Neighbourhood gangs are the most dangerous crimes that have threatened the social cohesion and national security through violence, physical and moral assaults, and disturbances within residential neighbourhoods. The latest statistics released by the General Directorate of National Security in November 2021, in the context of fighting urban crime in general and neighbourhood gangs specifically, showed that there has been an 11.73% increase in the cases involving physical assaults with prohibited bladed weapons. Additionally, 2,533 suspects across the entire national territory were arrested for their involvement in 2,295 cases of the same kind of crime<sup>1</sup>.

This phenomenon has widely spread and taken various forms according to the social shift in value systems and structure of Algerian society. The latter has unique features such as

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<sup>1</sup> The General Directorate of National Security, annual report on the activities of the operational departments of National Security for 2021, 2021, posted on <https://www.algeriepolice.dz/>

strong social relationships; especially neighbourly relations, unconditional assistance to others, and respect. These transformations have emerged due mainly to the new urban neighbourhoods in which their residents are totally different and contradicted because of the shift in social upbringing methods, roles, and social stakeholders. Information and communication technologies are important in individual and social consciousness, directing behaviours and influencing discipline. According to the latest statistics (January 2023), there are 5.44 billion mobile phone users, of which 4.76 billion people are on various social networks, representing 59.4% of the world's population (8.01 billion). (Zakaria Ben Seghir, 2023, p.1)

Given the current security situation, Algeria must develop its methods of countering the abnormal behaviours, such as neighbourhood gangs. It must apply modern and participatory ways due to society's increasingly use of technology. Out of 45.26 million Algerian citizens, 32.09 million are internet users, and 23.95 million have social media accounts (Zakaria Ben Seghir, 2023, p.3). This involves using the latest technologies and modernizes the security sector's services by rapidly deploying in areas of threat, ensuring easy communication and reporting to guarantee quick response and intervention.

This research paper aims to highlight the importance of digital transformation in the security sector to put an end to neighbourhood gangs. This is realized by obtaining the necessary, quick, and accurate information that helps fulfil this role. Combating these gangs is not only through tightening legal deterrence measures but also through the use of modern information and communication systems like electronic (smart) applications, which are "small computer programs that operate on the internet and are run through an electronic medium such as a smart mobile phone or a tablet (iPad, tablet). These applications include software packages that provide information in interconnected pages and designed to offer additional function to the user" (Rashasaudzakour, 2023, p.7).

Our research work aims to answer the following questions: To what extent do the Algerian security institutions apply electronic (smart) applications in combating neighbourhood gangs? How can modern applications be used to address neighbourhood gangs through a suggested model?

## **1. Factors Leading to the Involvement in Neighbourhood Gangs**

The concept of neighbourhood gangs has been defined variously from different perspectives and angles. Simply, they refer to each group consists of two or more individuals who belong to one or more residential neighbourhoods and engage in actions that create insecure atmosphere. These actions can include physical or psychological attacks, endangering their lives, freedom, or security, or damaging their property, thus they are a neighbourhood gang. This phenomenon has captured the attention and interests of many researchers to understand its causes, and suggest effective solutions to it. Therefore, we will discuss the key factors that lead young people to engage in these activities.

### **1.1 Socio-cultural Factors**

Neighbourhood is the only place where youth gather, especially in overpopulated areas that lack means of entertainment like youth centres, sports clubs, and others (Michel Kokoreff, 2012, p. 4). Sociologists considered that hard living conditions, such as cramped housing, push

young people to play in the neighbourhoods. They also stated that gangs are often formed from these youth gatherings. Delinquency resulting from personality disorders differs from traditional psychological illnesses like anxiety, depression, and obsession. It typically begins during adolescence, before the age of fifteen, and occurs mainly in crowded and chaotic areas. It is more likely to happen in large families and low social and educational levels. Studies conducted on the relatives of delinquents showed that the same behavioural disorder exists in their relatives at five times the usual rate<sup>2</sup>.

**Illiteracy:** It often leads to the increase of crime as education helps the individual to foresee the consequences of actions and consider their current and future results. Unlike illiteracy, which usually narrows an individual's perspective and makes it difficult to understand such consequences, an illiterate criminal often lacks the ability to foresee the dire consequences of his actions until it is too late.

**Focusing only on educational skills and neglecting the other ones:** This leads some students to fail in their education. Most studies revealed that the majority of neighbourhood gangs left schools early or faced problems in their educational journey. They often try to cover up their academic failure by using power and dominance in their living area (Sajida Lazerq, 2013, pp. 19-20).

**The lack of parental supervision:** Parents are unable to control their children or they are busy and do not have time for correcting their children's behaviours, making them susceptible to these phenomena and attracted to them.

**Family separation:** It is one of the reasons that keep children away from their parents where they miss upbringing. Indeed, this leads not only to delinquency and personality disorders but also to gangs to hide those imbalances and form a new closer family. Emile Durkheim viewed that weak social bonds lead to a weakening of the sense of belonging to the group. Youths are most affected by this situation which makes them inclined towards crime and delinquency as a means of expressing themselves. People who cannot form relationships and fail to achieve their academic and professional projects are most exposed to marginalization. Consequently, they could not cope with the social and cultural reality they belong to and develop the belief that they are not concerned with social life laws. Family separation makes the authority that society has towards its members weak and meaningless, leading them to lean towards crime. It is noted that social chaos occurs in exceptional circumstances that societies go through, especially economic crises (Alili Abd El-Samad, 2013, pp. 87-88).

In another side, this is due to the fact that those young people want to protect themselves and ensure they are not subjected to harassment, harm, and violence from other gangs and delinquents. They may also need to achieve self-satisfaction and masculine identity by proudly belonging to those gangs (Hafidha Ben Mohammed, 2022, p. 582).

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<sup>2</sup> Saleh ben Ghanem Al-Sadlan, "Causes of Terrorism, Violence, and Extremism," Professor of Graduate Studies at the College of Sharia in Riyadh, Al- Imam Mohammed Ibn Saud Islamic University, <https://books-library.net/free-472920021->

**Lack of punishment of children and knowing the sources of money and items they bring home:** This happens even though parents are aware that their children have no incomes (Michel Kokoreff, 2012, p. 3).

## 1.2 Economic Factors

The lack of individual income, poverty, unemployment, and inability to meet needs in the current times where temptations are abundant in all areas of life, lead to a feeling of material deprivation. The latter fuels negative attitudes and feelings such as hatred, envy, and inadequacy. All these factors contribute to creating aggressive tendencies or delinquent behaviours. Numerous studies proved the relationship between low economic status and unemployment, crimes and delinquency occurrence (Haitham Kareeb and Belgheith Mohammed Tayeb, 2024, p. 616).

## 1.3 Religious Factor

Leaving a distance from God and attaching to sins lead to the heart's death and heedlessness, and remove the shame from the sinner. As Al-Imam Ibn Al-Qayyim states, sins breed their kind and generate one another. A person continues to commit sins, and as this sin becomes insignificant in his eyes, it grows in the eyes of God. This persistence in committing sins is a sign of the loss of shame, which is the essence of the heart's life and the foundation of all good, its disappearance results in the loss of all good (Ibn Qayyim Al-Jawziyya, 1996, p. 139).

## 2. Gangs Phenomenon in Algerian Urban Neighbourhoods: Specificity and Uniqueness

As all worldwide countries have gangs, Algeria is not an exception. However, the danger of each gang varies from one country to another and even within the same country due to differences in their formation goals, types of criminal activities, and structure (such as mafia involving political, military, financial, and judicial figures, ...), and their national and global level. Despite the crimes committed by neighbourhood gangs in Algeria, they have not yet reached the level of gangs abroad in terms of their organization, structural complexity, strength, violence, and historical roots (Hafidha Ben Mohammed, 2022, pp. 583-584).

It is worth noting that the Algerians are peaceful and socially cooperative, but there are oppressive social circumstances that are fuelled by inappropriate behaviour lead to physical and psychological violence in neighbourhoods (Salim Mazhoud, 2021, p. 18).

In general, researchers categorize crimes in Algeria as follows (Hafidha Ben Mohammed, 2022, pp. 583-584):

- **Crimes against property:** theft, arson, vandalism, neglect, and carelessness.
- **Crimes against persons:** murder with its various forms and means (swords, daggers, ...).
- **Physical assault:** beating.
- **Crimes against public system:** crimes against state security, chaos and vandalism.
- **Crimes against religion:** attacks on worship places or disturbing their.

- **Crimes against the family:** adultery, child neglect, infidelity, and divorce.
- **Crimes against morality:** obscene acts and public indecency.
- **Crimes against vital resources of society:** illegal hunting, irrigation outside designated times, or wasting resources...

Additionally, verbal crimes such as threats, insults, and defamation are widely prevalent and committed by neighbourhood gangs. However, the latter are characterized by their excessive use of different swords and daggers, as well as the other tools mentioned earlier.

Regarding types of murder, there are several classifications, but the most notable include:

- **Premeditated murder:** When a person intentionally kills another.
- **Quasi-premeditated murder:** When a person intends to harm but not kill the victim. For example, beating someone with a small stick that results in the victim's death.
- **Involuntary murder:** When the perpetrator does not intend to kill or harm the victim.
- **Accidental killing:** When death occurs without the perpetrator's intention or action, such as accidentally suffocating a child by turning over onto him while asleep.
- **Negligent homicide:** When a person's actions inadvertently cause another's death like digging a pit in a public street without warning passersby and this leads to someone to fall in and die.

The prominent reasons for these crimes are hard social conditions such as divorce, family disintegration and disrupted family relationships, school failure, bad friends, social media, violent video games, and television programs that address criminal topics and inadvertently contribute to the spread of violence. In addition, it is mistakenly believed that the Algerian individual is inherently quick-tempered. This idea may apply to some and it may not to all. Like any human being worldwide, an Algerian's irritability is only triggered by negative provocation. Thus, spreading the stereotype of quick-tempered Algerians can program society towards violent behaviours (Salim Mazhoud, 2021, pp. 19- 20).

### **3. The digital transformation in the Algerian security system as a mechanism to combat neighbourhood gangs**

#### **3/1. The necessity of using information and communication technologies in combating neighbourhood gangs (Imad Hocine Abd Allah, 2005, p. 141)**

Information and communication technologies (ICT) are needed in various security fields, particularly in combating neighbourhood gangs. This requires accurate and rapid information presented in a sophisticated and modern manner. Combating this type of crimes involves swift security decisions, which depend on the availability of timely and accurate information. The introduction of ICT in this context is crucial for several reasons:

**-The need for speed in accessing information:** Security agencies must have access to a system that provides various data quickly to obtain the necessary information concerning neighbourhood gangs promptly.

**-The need for accurate information:** During security incidents involving neighbourhood gangs, a plenty of data are displayed. Ensuring accuracy is crucial to avoid wasting time and effort in sorting and verifying the information.

**-The Need for up-to-date information:** Data collected within information systems must be regularly updated to maintain reliability and effectiveness in decision-making.

**-The Need for appropriate information presentation:** The method of presenting information significantly impacts decision-making, as clarity and precision are essential to avoid misinterpretation or misrepresentation of the security situation.

### **3.2 Information technology and security decision-making:** (Achraf Al-Said, 2012, pp.25-26)

Effective security operations hinge on timely and informed decision-making. Modern ICT facilitates this by:

-Using modern communication devices and networks to enhance response times and intervention capabilities.

-Providing extensive data to law enforcement to identify and combat criminal activities.

-Ensuring data availability across security units within legal boundaries, this facilitates decentralized data ownership and enhances decision-making efficiency.

-Leveraging geographic information systems to link conventional databases with spatial data for improved decision-making.

It is clear that information and communication technology plays an important role in the security decision-making process. It also highlights the necessity of information available and ensuring that it is timely, appropriately formatted, and accurate.

### **3/3. Digitization of the Algerian security system to combat neighbourhood gangs<sup>3</sup>:**

The Algerian state has prioritized the development of its national security system to combat neighbourhood gangs. This involves:

A forward-looking security policy based on scientific and academic foundations has enabled the National Security Agency to enhance the training of its personnel in order to combat gangs. The General Directorate of National Security has opted to modernize its equipment to better counter the gangs that threaten the safety of citizens. This is achieved by equipping the security sector with highly advanced tools such as explosive and metal detection devices and personal digital assistants (PDAs) for tracking and identifying wanted vehicles and individuals. Additionally, it establishes smart patrols equipped with very advanced radar systems that use automatic license plate reader (LAPI) technology. This technology allows for the reading and capturing of precise images of vehicle license plates, day and night, over 360 degrees, at a rate of 8,000 vehicles per day, whether these vehicles are in motion or parked. The

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<sup>3</sup> Jamila, A. "The Algerian Police Showcase Their Equipment and Achieve Pioneering Accomplishments," Al-Massaa Newspaper, July 21, 2014. Website : <https://www.el-massa.com/dz>

data is quickly analyzed and instantly compared with the database. These new technologies have enabled the dismantling of several networks specialized in car smuggling across the country.

In the same context, the General Directorate of National Security established the Control Centre for National Security in the City of Science in Algiers. Its mission is to supervise the operations room for surveillance cameras, which have been installed and distributed across various roads and streets in Algiers, Blida, and Oran. It aims at achieving comprehensive security coverage in the field, controlling traffic movement, and combating criminal activities, while awaiting its expansion to the entire national territory.

The General Directorate of National Security has also spared no effort in supporting its forensic police laboratory in Châteauneuf. It has been equipped with the latest equipment and advanced materials for uncovering most committed and complex crimes, scientifically analyzing evidence through fingerprints, genetic fingerprints (DNA), and detecting explosives, drugs, and forged documents. The laboratory also handles cybercrimes in the digital evidence and information technology sections, which possess developed tools that retrieve electronic data stored in memory cards of computers, mobile phones, and digital cameras.

To improve the field working conditions of these services, efforts have been made to modernize IT programs in the police force by developing and generalizing electronic programs and systems. These include the Algerian Police Identification and Research System (SIRPAL), which facilitates access to the criminal record database under an agreement with the Ministry of Justice, the Person Identification System (NRH), the Criminal Identification and Research System (SIRC) for identifying criminals based on reconstructing their physical features from information obtained from victims and comparing it with the profiles of suspects in the database, the Vehicle Record System (FVR) for wanted vehicles, and the Unified Investigation Procedures Program (LRP), which aims to standardize investigation procedures in accordance with criminal measures.

To enable the aerial security to monitor the movements of criminals and effectively counter their criminal plans and combat violence and maintain public order, it has been bolstered with 14 high-tech helicopters equipped with advanced surveillance cameras of the WESCAM MX15 HDI type and SX16 searchlights, which operate using infrared technology and digital mapping systems. These helicopters are equipped with three MFD screens, two loudspeakers that can be directly connected to the police radio network, as well as HF, UHF, and VHF frequency radios, and a satellite phone.

These helicopters provide aerial security coverage and take photographs from high altitudes to support the police forces in the field. Additionally, the border police services at ports and airports have been equipped with the latest detection and monitoring technologies, including high-tech surveillance cameras and scanners to monitor the movement of people, goods, and prohibited materials to and from Algeria, along with devices to detect fake documents. Travel documents are automatically subjected to ultraviolet scanners to verify their authenticity in order to combat illegal immigration.

Thanks to these facilities and promising future strategies, the Algerian police have achieved significant strides in establishing the foundations of a modern police force

characterized by professionalism and high performance. This has made them a destination for all international security institutions seeking to benefit from their valuable experiences and expertise in combating crime, protecting citizens and their property, and achieving security and stability in the country.

#### **4. A Proposal for a Smart Application Model to Combat Neighbourhood Gangs in Algeria**

##### **The Application Name: My City Application**

**The Application Authority:** This application is directed to the General Directorate of National Security in Algeria.

**The Application Idea:** It is based on reporting and informing (by citizens) about the various crimes occurred by neighbourhoods organized gangs.

**Application Description:** My City Application is an official application in Algeria that any citizen with a national ID number can use it easily. The user can submit an official report to the nearest security centre as if he was personally present at the police station and filed a report in the usual manner. Downloading this application requires identity information and the national identification number so that individuals reporting criminal acts are identifiable. This helps prevent false reports and ensures that all reports are taken seriously.

This application operates with translation to Arabic, French, and English. Its key feature is ensuring individual privacy because it is equipped with information protection system, network and device security management, information processing systems, and access identities in addition to reporting with confidentiality of notifications and communication via phone calls and emails. It is available for Android devices (ordinary phones) and iOS devices (iPhones) and it guarantees free communication.

**The Application Download Stores:** It can be downloaded from all the available stores such as GOOGLE PLAY, Aptoide, Amazon Appstore, Galaxy Store, and GET JAR.

##### **The Application Functionality:**

This application consists of a set of icons divided according to the administrative divisions of each Algerian province. As you open the application on an Android or iOS device, the app will automatically determine your location using GPS functionality; for example, your current location "Souk Ahras Province".

Once the geographical location is determined, the application begins its operation by displaying subdivisions of all neighbourhoods within that geographic area, such as Alawia District, Ibn Roshd District, Shahid District, 1700 Housing District ... This allows precise identification of neighbourhood gangs' locations.

In fact, the automatic geo-location feature for reporting will save time and ensure quick intervention for security services. It also provides a map of the operational area of each gang. The application includes pages with icons categorized according to potential criminal activities committed by neighbourhood gangs, such as:



- Theft
- Vandalism
- Murder
- Use of white weapons
- Threats
- Insults
- Drug trafficking
- Abuse and beating
- Harassment
- Other criminal acts

After selecting the geographic area, neighbourhood location, and type of criminal activity, the user is asked to provide certain information to assist in the operation. For instance, if the criminal act is harassment, the application will ask questions like:

- Is the harassment currently happening?
  - Yes
  - No

Where are you located?

- Car
- Building entrance
- Street
- Specify other locations

Then the user is asked for a contact method:

- Phone number
- Email address

If the answer is no (the criminal act has already occurred), the application will ask additional questions, such as the type of harassment:

- Verbal
- Physical
- Pursuit

The user inputs data related to the incident date and description of the perpetrator. The application also ensures the attachment of the report with audio, video, or image files with protecting individual privacy. It has been simplified in a way that all citizens, regardless of their educational and cognitive levels, can use it easily.

**Note:** This application is proposed for design by the General Directorate of National Security. Therefore, it is the only responsible for inserting data regarding neighbourhood gangs and criminal activities. The previous model is an illustrative example that can be modified based on that directorate's database.

## Conclusion

It is a common truth that the digital transformation in the Algerian security system is still undergoing gradual development towards its widespread adoption, akin to many international experiences. It requires extensive studies due to the unique intersection between modern technology and security apparatus on one hand, and the specificity of Algerian neighbourhoods on the other hand. These interactive dimensions are within a renewing social system. Fighting neighbourhood gangs according to this strategy is imposed by ideological, technological, and cultural developments that Algeria has been experiencing in recent years because of its increasing openness to the world, and this brings both opportunities and threats.

Despite the obstacles hindering the digital transformation process in Algerian institutions (particularly the security system), our research aim is to establish a socio-communicative digital model that engage citizens in protecting individuals and properties from neighbourhood gangs. This is due to the positive role individuals play in achieving the security mission's objectives and overcoming the fear that has long deterred citizens from exercising their citizenship effectively.

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