

**GRAPHOLOGY AND
EARLY DETECTION OF CRIMINALITY: A
STUDY AMONG YOUTHS IN HAIL, SAUDI
ARABIA**

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UNIVERSITI SAINS MALAYSIA

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**GRAPHOLOGY AND
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STUDY AMONG YOUTHS IN HAIL, SAUDI
ARABIA**

by

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LIST OF ABBREVIATIONS

HSO	House Social Observation
IPC	Indian Penal Code
SLL	Special & Local Laws
UCR	Uniform Crime Reports
NCVS	National Crime Victimization Survey
ISRD-2	International Self-Reported Delinquency study
ADHD	Attention-Deficit/Hyperactivity Disorder
ODD	Oppositional Defiant Disorder
CD	Conduct Disorder
DAT	differential association theory
CCTV	Closed-circuit television
C	Case
USM	Universiti Sains Malaysia
USM JEPeM	Universiti Sains Malaysia, Jawatankuasa Etika Penyelidikan Manusia
JEPeM	Jawatankuasa Etika Penyelidikan Manusia

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GRAFOLOGI DAN PENGESANAN AWAL JENAYAH: SATU KAJIAN DALAM KALANGAN REMAJA DI HAIL, ARAB SAUDI

ABSTRAK

Belia merupakan penggerak kepada pembangunan masyarakat. Namun begitu, pada masa yang sama, jenayah di kalangan belia telah berakar umbi dalam kalangan masyarakat. Sebagai sebuah negara yang semakin berkembang ekonomi, negara Arab Saudi amat memerlukan sumbangan golongan belia bagi memastikan negara menjadi maju pada abad ke-21 walaupun terdapat golongan belia yang terlibat dalam pelbagai aktiviti jenayah. Maka sebab itu, adalah penting untuk mengkaji kejadian jenayah di kalangan belia kerana golongan tersebut penting untuk merealisasikan matlamat pembangunan negara. Sains grafologi digunakan untuk mengenal pasti watak dan tingkah laku manusia melalui tulisan tangan mereka. Penyelidikan semasa yang berbentuk kajian penerokaan bertujuan untuk mengesan ciri-ciri penyimpangan awal dalam kalangan belia. Saiz persampelan bagi kajian semasa adalah sebanyak lima belas (15) responden yang menjadi tahanan rumah serta menjalani pemerhatian sosial dalam tempoh yang berbeza di bandar Hail atas kesalahan yang mereka lakukan. Teknik pengumpulan data terdiri daripada temu bual mendalam dan pemerhatian tulisan tangan yang diperolehi daripada sampel tulisan setiap responden bagi analisis selanjutnya. Alat grafologi digunakan untuk membantu mengesan perwatakan setiap responden. Hasil dapatan menunjukkan bahawa majoriti responden datang daripada keluarga yang kurang berkemampuan. Terdapat juga beberapa sifat personaliti negatif dalam kalangan responden. Ciri-ciri negatif ini termasuk sifat agresif, gementar, degil, masalah dengan jantina berlawanan jenis dan berbohong. Sifat-sifat negatif ini

mempengaruhi tingkah laku menyimpang (jenayah). Oleh itu, tingkah laku menyimpang seperti perbuatan meliwat, membakar, menderhaka kepada ibu bapa, bergaduh, bertikam, menculik, memeras ugut dan mengedar dadah telah dikesan di kalangan responden. Pihak berkuasa disyorkan menyediakan pemerkasaan ekonomi kepada keluarga yang kurang bernasib baik dan mudah terpengaruh. Belia (terutamanya remaja) harus menjalani latihan keusahawanan dan atau vokasional. Pendidikan asas harus ditekankan, sementara latihan pekerja sosial dan psikologi di sekolah perlu diberi keutamaan. Oleh itu, semua pihak berkepentingan yang terdiri daripada pihak berkuasa dan masyarakat harus bersatu untuk mencapai matlamat tersebut. Dengan pelaksanaan tersebut, bukan sahaja kehidupan sosio-ekonomi masyarakat akan berubah menjadi lebih baik, malahan ia akan membuahkan hasil yang bukan sahaja menguntungkan kehidupan belia di Hail tetapi bagi seluruh masyarakat di Arab Saudi.

GRAPHOLOGY AND EARLY DETECTION OF CRIMINALITY: A STUDY AMONG YOUTHS IN HAIL, SAUDI ARABIA

ABSTRACT

Youths have been the engines for any societal development. Similarly, crime remained an integral part of every human society. The Kingdom of Saudi Arabia is a growing economy that needs the contribution of youths to ensure a propelled developed nation in the 21st century despite the youths' involvement in various crimes. That's why it became necessary to study youths' criminality due to their importance in the realisation of the developmental goals of the country. Graphology science is used in detecting people's characters and behaviours through their handwriting. As an exploratory study, the current research aimed at detecting early deviant characteristics among youths. Being detainees at the House Social Observation in Hail City (HSO) for offences committed at different periods, a total of fifteen (15) respondents were selected as the sample size. The data collection techniques consist of in-depth interviews and handwriting observations, as each respondent provided a sample of handwriting for further analyses. Graphology tools were used to aid in detecting the individual character of each respondent. It was discovered that the majority of the respondents came from less privileged families. Also, a number of personality hell (negative) traits were discovered. These hell traits include the traits of aggressiveness, nervousness, stubbornness, issues with the opposite sex, and lying. These hell traits are responsible for influencing deviant behaviour (criminality). Hence, deviant behaviours such as sodomy, arson, disobedience to parents, fighting, stabbing, kidnapping, blackmailing, and drug dealings were all detected therein. It is recommended that concerned authorities should provide economic empowerment to

less privileged and vulnerable families. Youths (especially teenagers) should undergo entrepreneurial and or vocational training. Basic education should be developed, and training school social workers and psychologists. Therefore, all stakeholders comprising concerned authorities and other communities should unite to achieve the common goal. Hence, the socio-economic lives of the citizenry will change for the better and which, in turn, yield fruitful results not only for the youths' life in Hail but for the entire society of the Kingdom of Saudi Arabia as a nation.

CHAPTER 1

INTRODUCTION

1.1 Introduction

The utilization of artifacts to express emotions and meanings among group members is a unique trait of Homo sapiens. Around 35,000 years ago, humans began crafting symbols that depicted themselves and the animals surrounding them. Archaeologists trace the earliest carved symbols, which are considered the precursors to modern handwriting, back to around 10,000 years ago (Van Galen, 1991).

Graphology is the study of handwriting. It is a science that reveals an individual's natural graphic movements, personality, temperament, intelligent behaviour, professional and social abilities, and a person's obsessed inner talents through handwriting. Its specific analysis results in a psychosocial-behavioural portrait. This also resembles psychologists' work, which only focuses on the interaction between the human psychological and biological components which reflect in an individual's handwriting (Iulia, 2015). The term graphology was used for the first time in Paris by Abb Jean-Hippolyte Michon, the founder of the Graphology Society. He is the first person to give scientific grounds for handwriting analysis (Mishra, 2017).

Today, graphology is said to have been a field of study for almost four hundred years ago (Mishra, 2017). The first research on handwriting analysis was written in 1622 by Camillo Baldo, an Italian professor at the University of Bologna. He wrote the first book on graphology titled "How to Assess the Character of People from a Letter." In this book, it is indicated that every person writes in a unique way. That

means no two people write in the same pattern. However, there could be some similarities, although they are different.

Handwriting is one of the unique characteristics that represent what are in our minds to communicate with others. According to Huber et al. (1999) and Ow et al (2005) handwriting is a motor skill which is complex in nature, combining different sensory, neurological, and physiological impulses. It reflects the true personality as regards to one's behaviour, emotional outlay, self-esteem, anger, imagination, honesty, fears, defences, and many more personality traits (Huber, 1999; Ow et al., 2005). This is commonly known as Graphology.

Graphology is the scientific method for recognizing, appraising, and understanding the writer's personality through shapes and word patterns in handwriting. These include zone, baseline, slant, size, spacing, margin, pressure, height of T-bars, and position of I-dot. The features in handwriting suggest the personality of the writer. Applications of handwriting analysis are extensive in fields like psychology, medical diagnosis, staff recruitment, career counselling, writer identification, and forensic studies (Mishra, 2018). The analysis of handwriting relates to the projective tests of personality through which one can know their temperament, genetic factors that give way to our behaviour, the biological basis, and what kind of a character it is. Our behavioural tendencies and responses are learned throughout life on the basis of life experiences (Elngar et al., 2020). Cunha (2022) also illustrated that graphology is an art and science related to handwriting analysis. It refers to a method used to understand and predict an individual's characteristics based on their writing style. Handwriting entails a complex motor skill in which biomechanical and cognitive processes contribute to the handwritten product's spatial shape and kinematic

characteristics. In addition to graphology's ability to convey the meanings of the written words, it was based on the theory that handwriting is an expression of individual characteristics of personality, mindset, and ability (Cunha, 2022).

Modern versions of graphology are rooted in the late 19th and early 20th centuries. Meanwhile, handwriting has been known for character detection over centuries. Hence, the first known book of graphology was found in Spain in 1552 (Wulansari & Kusman, 2019). Similarly, the Germans used graphology in psychiatric experiments using handwriting analyses. Hence, the examination of writing was part of an ensemble of diagnostic tools (Schäfer, 2016).

Graphology is used in different areas: clinical, business, expert witness, and criminalistic. In the clinical field, it consists of aptitude and potential assessments of people, orientation at school and in one's career, and compatibility in relationships. At the same time, in the business world, graphologists enhance personnel selection and support organizational reorganizations. In the context of expert witnesses, they can clarify cases where signed documents can or cannot be authenticated, discover anonymous or forged authors, and detect forgeries and fabrications. It can make the work of the graphologist easier to detect the age and gender, although this cannot always be easily achieved in anonymous documents from the scene of a crime. The potential of graphologists is mainly to prepare a personality profile that helps an inquiry, which makes forensic graphology an important tool (Galvano et al.).

Graphologists, therefore, view handwriting as a category of nonverbal behaviour that illuminates underlying mental characteristics of the person's handwriting, potentially including characteristics that the writer would prefer not to disclose or perhaps is not even conscious of possessing. This perspective was

compelling enough for a pair of eminent psychologists, Gordon Allport and Phillip E. Vernon, to provide graphology with an early endorsement as a scientific discipline in their 1933 book “Studies in Expressive Movement”. Meanwhile, Graphology is based on examining the dynamic and individual manner of writing. There are certain patterns in tendencies of one's style of writing; this may allow inferences regarding personality, hence making graphology a more scientifically grounded method toward the revelation of character traits. This delineation is important due to the fact that a host of other practices, including astrology, palmistry, and phrenology, are all categorically labelled as pseudo sciences primarily due to the fact that they lack empirical evidence in their favour. In contrast, graphology is predicated upon the analysis of handwriting, for the development of a more credible and evidential-based approach toward inferring personality traits (King & Koehler, 2000).

Also, forensic investigators use handwriting patterns and technology to determine an individual's personality traits. In different social agencies, graphology is used for many purposes, such as checking and motivating different employees' and child behaviour. Others include the development of applications for job recruitment procedures, compatibility for marriage, and career guidance (Huber & Headrick). The same authors have proven its validity and authenticity in a comprehensive handwriting analysis study that "examined forensic evidence". That is done by analyses of handwriting from physical evidence due to physical evidence's crucial vitality (Harralson & Miller, 2017).

Language is not only a means of communication but also a means of expressing ideas in written form. Through writing, individuals can express their thoughts, intentions, feelings and messages in various situations, including criminal situations.

The Zodiac Killer is a prime example of the use of language in a criminal context and a stepping stone to highlighting the importance of graphology as an assessment tool for handwriting (Pramudita et al., 2020). A string of brutal murders that spanned from 1968 to 1969 in the California Bay Area, together with cryptic messages transmitted by the killer, who came to be known as the "Zodiac Killer," terrorized Northern California. He had sent a coded message to the local newspapers about his reason for the mayhem, stating that his identity was hidden in a very complex cipher. While the motive was deciphered, the killer's identity remains a mystery. This unsolved mystery of murders and the extensive style of communication by the Zodiac Killer still is a very attractive subject for screenwriters, authors, people who are interested in true crime, forensic scientists, and law enforcement. While not technically a federal case in which the FBI was assuming an open investigation into the circumstances behind the murders, the Bureau did play a very key role in supporting municipal law enforcement. That support included handwriting analysis, cryptanalysis, and fingerprint analysis. Correspondence between law enforcement officers in Northern California and the FBI's Laboratory, particularly with its Technical Evaluation Unit, reflects efforts to analyze handwriting and fingerprints from the killer's letters and to break a complex cipher; ultimately, the code was published and has been broken (Federal Bureau of Investigation, 2007).

Accordingly, experts on handwriting study large portions of handwriting from different samples to determine handwriting traits that correspond to certain characteristics as Zodiac Killer cases. Apart from human analysis to examine handwriting samples, technologies have recently been developed to assist those experts in carrying out this tedious task (Mishra, 2017). Various studies using experiments and scientific techniques have validated handwriting analysis as a method

of personality assessment. However, the method of analysing a person's handwriting is conventionally called a handwriting examination.

By looking at the handwriting, one can judge based on the writer's enthusiasm, costs, anxieties, trustworthiness, mental state, and various other identification qualities. Other feelings may be the disclosure, identification, and response to the emotions associated with a particular situation vis-à-vis handwriting analysis. Accordingly, the persistence of graphology science in predicting personality traits is attributed to the correlation phenomena.

It was discovered that the observed correlations were due to a semantic association between adjectives characterising complex writing features and personality traits. This could, however, explain why graphology science is still utilised, with overwhelming predictive values. Whereas graphology science is increasingly applied to appraising personality, attitude, talents, and potential in some criminal cases because of opportunities provided by this kind of science. In the process of analysing handwriting, graphologists can notice very subtle hints that reflect a person's emotional state, behavioural tendencies, and cognitive traits, which will not be so easily detectable through other kinds of investigation. For instance, some characteristics in handwriting may indicate levels of aggression, anxiety, or impulsivity that may be relevant to the subject's tendency to be involved in the commission of a crime or not predict the violent reaction. Graphology is, therefore, quite valuable for criminal investigations as it goes a long way in assisting law enforcers and forensic experts develop much more elaborate profiles of criminal perpetrators. In addition to proving the validity of documents and separating signatures, graphology science is increasingly

used to assess an individual's personality, attitude, talents, and potential in certain cases of crime (King & Koehler, 2000).

Experimental studies of manual calligraphy are relatively long but were typically carried out before some new sharpening tools were developed. Lewison-Zubin (1954) presented working analytical research that made experimental studies more robust. Lorr et al., performed a factor analysis and identified four distinguished factors related to the subject of graphology as a modern science of writing: breadth of letters in the lower and upper regions, length of the letters in the lower and upper areas, the height of the letters in the middle area, and the inclination to write in an upward direction on a particular page (Lorr et al., 1954).

These graphology features mentioned above (as argued by scholars) were used to determine criminal behaviour, specifically among youths. This is what formed the basis of the current study, which aims to detect criminal behaviour among the youth inmates in the House Observation Social at the Hail detention centre in the Kingdom of Saudi Arabia.

This study focuses on graphology in the early detection of youths' criminality. It is, therefore, important to discuss crime in the study area and relate it with graphology which is the key concept of this study. Meanwhile, crimes within Arab countries and Saudi Arabia, in particular, are mostly centred on a cross-cultural basis and are being handled by police stations in the affected areas. Graphology science assists law enforcement agents in investigating and ascertaining crimes committed. While these crimes overlap, the use of graphology science helps to distinguish between them because there are significant variations in the way these crimes are executed (*modus operandi*), the locations and times in which they occur (spatial and temporal

allocations), and the underlying socioeconomic factors that influence youth behaviour. For instance, changes in handwriting could show differences in stress, intent, or psychological state, which in turn may be related to kinds of socioeconomic conditions or cultural contexts. Graphology can thus lead to identifying patterns and differences in criminal behaviour, which are otherwise difficult to observe through other investigative methods. This will allow a more subtle understanding of the motivations and circumstances in which youth crime occurs, which can be crucial to law enforcement and prevention strategies (Alotaibi et al., 2019).

The science of graphology, routine activity theory and the pattern of youth crime were developed from standard environmental criminological theories (Sutton et al., 2021). These can assist in the investigation of crimes being synonymous with youths. Hence, the Western context in which these theories originated differ significantly from the Arabian context. Thus, there is still a dearth of literature in this regard, particularly in the middle east, as no research has sought to assess the validity of these theories within a different cultural background vis-à-vis graphology science (Alotaibi et al., 2019).

For instance, reducing crime rates is one of the essential pillars of the vision of the Saudi Arabian Kingdom of 2030. It also seeks to develop necessary measures through the early detection of criminal tendencies. Hence, this study is in line with Saudi Arabia's vision of early detection of criminality, especially among the youths, who are the pillars of social, political, and economic development. The Saudi Arabian Kingdom's youths are primarily teenagers between the ages of 12 and 18. They are the major focus of the study because of their importance and central value to societal progress.

In addition, the science of graphology is seen as underutilised or a relatively virgin field of research not only in Saudi Arabia as a country but within the global context. Hence, the middle east is a region where violent crimes, especially among the youths, are not so much explored. Speculations of statistical estimations and common beliefs (largely cultural and religious) remain the yardsticks upon which criminal explanations are based. Thus, the utilisation of graphology science in the newest discoveries of crime detections among the youths in Hail, Saudi Arabia, is very paramount and crucial. This is, nevertheless, a gap that the current study hopes to bridge. The study, therefore, investigates the early detection of criminality among the youths in Hail, Saudi Arabia, using graphology science. This appears as a novelty in the modern field of criminology that can stand the test of time.

1.2 Problem Statement and Study Rationale

Youth crime is a serious social problem that affects contemporary societies and nations because of its negative consequences. Thus, it has been among the most complex social phenomena that disturb humanity worldwide. This is imperative due to its repercussions being inflicted over time. Hence, the rising rate of crimes among youths is alarming as it affects the safety and security of any given society. The global records of the year 2000 indicated that people aged 10 to 20 accounted for 16 percent of the criminal population, representing 32.1 percent of all arrests. Similarly, 29.8 percent of all arrests were for violent crimes, and 48.3 percent of the arrests were for property-based crimes (Evans Cuellar et al., 2006). Some of the identified violent crimes include armed robbery, aggravated assault, and homicide. In the same vein, property crimes include but are not limited to swindling, phishing, and breach of trust.

Furthermore, United Nations (2019) statistics show that over 1.8 billion people arrested were between 10 and 24 years, making up the largest generation record in world history. Meanwhile, close to 90% of these categorised offender populations of youths live in developing countries of Africa, Asia, Latin America, and the Middle East. To vindicate such a claim, youths are said to have made up a large portion of the population of these countries. However, their numbers are expected to grow to 1.9 billion by the year 2030. While this study focuses on the high rise of crimes in Hail, Kingdom of Saudi Arabia, using graphology science, it is important to discuss the relationship between graphology and the youths' crime.

Various studies using scientific experiments and techniques have validated handwriting analysis as a method of personality assessment. Recently, techniques have been developed to aid handwriting experts in this arduous task. Along with human analysis of handwriting samples, handwriting experts' study large portions of handwriting from different sources to identify handwriting traits corresponding to certain characteristics. (Mishra, 2017).

A handwriting analyst looks at four different aspects of handwriting: method, graphics, grammar, and contextual linguistics. Using a text, which often contains important information about the writer that can be utilised for assessing personality traits or forecasting behaviour, is one of the challenges with most attempts to validate graphology as a utilisable field of scientific study (Gawda, 2008).

In addition to manually written records, an inquiry is a logical process for determining and comprehending a person's identification based on the strokes and patterns revealed by certain authors' handwriting. The proposed division approach is based on a different horizontal and vertical projection that can fragment content lines and words regardless of whether they are covered or multi-skewed (Joshi et al., 2015).

In a modern society characterised by the predominance of secondary rather than primary relationships, the sociopath or psychopath functions, in popular culture at least, as a prime index of contemporary social unease. The sociopath is like the nice neighbour next door who one day “goes off” or is revealed to have had a sinister second life. In many ways, the sociopath is a cypher for many of the anxieties we have about the loss of community and living among people we do not know. In this sense, the sociopath is a very modern sort of deviant. Contemporary approaches to psychopathy and sociopathy have focused on biological and genetic causes. This is a tradition that goes back to 19th-century positivist approaches to deviance, which attempted to find a biological cause for criminality and other types of deviant behaviour (Little & Little, 2016).

The population survey showed that the number of young people in Saudi Arabian society is large, with 24.8% of the population under 15 years of age. Of course, this age group constitutes a huge chunk of the population (72%) as the range is also big, i.e., 15 to 60 years (Stat, 2019). Where a reasonable number of youths seek to be involved in a crime, much must be done to remedy the lingering problem affecting an important societal segment of youths upon whom multifaceted transformations always depend.

However, according to the 2019 Global Crime Index, Saudi Arabia was ranked 101st with 28.22% scores (Crime Rate by Country, 2019). A recent report by the Ministry of Interior indicated that the crime rate in the Kingdom of Saudi Arabia decreased by 6.5% in 2020 compared to the three previous years of 2017. Thus, crime rates among students (who are virtually youths) represent a high percentage of nearly 17% of the total crime rates in the country. These statistics is a source of concern

because the youth group is the basis of social construction in any prosperous society (Alshuwaikhat & Mohammed, 2017).

Statistics from the government of the Kingdom of Saudi Arabia show that those in the age group between 0 and 34 years old made up about 67% of the total population. In comparison, those between 15 and 34 years old are estimated to be about 37% of the total population (Basheikh et al., 2021). In addition, the Kingdom of Saudi Arabia has launched its Vision 2030, in which one of its aims is to reduce crime in the kingdom (Vision, 2017). It is argued that to achieve this target, crimes among the youths must be seriously researched, in the course of which findings, more solutions shall be provided to remedy the worrisome situation. An attempt that renders the current study desirable.

Meanwhile, the statistics on youths and crime in Saudi Arabia are a cause for concern as the Saudi Arabian government has provided all means to achieve social security in addition to fight against unemployment in conservative communities that renounce crime because of the social context and cultural structures. Characteristically, Saudi Arabian society is influenced by Arab and Islamic cultures, which made many juvenile delinquency and other criminal cases domiciled as dark figures¹. Thus, such issues **were instead addressed informal** or customary justice mechanisms (Alruwaili, 2019). Examples of such crimes consist of violent type (rape) and public order type (sodomy or drug abuse).

¹ Dark figures of Crime comprise of three dimensions: Committed but undetected crimes, committed, detected but unreported crimes, and committed, detected, reported but unrecorded crimes.

The inability to be contained in the official crime records not only obstructs the government policies in ameliorating the situation but also hampers the sustainability and success of academic and/ or basic research through which a final solution could be met. With all these backgrounds and contemporary characteristics of Saudi Arabian society, there is still a need for more youth crime-related literature as there is a dearth in especially the academic fora at both local and national levels. Hence, there is a need for academic research that identifies the personality traits of youth vis-a-vis criminality.

In its Vision 2030, the Kingdom has made clear its priority to developing human resources and highlighted the crucial role they play in achieving the ambitious goals of the vision. The vision relies on the youth category, which represents the age group between 15 and 34 years as the largest segment of the Kingdom's citizen population. Crown Prince Mohammed bin Salman has highlighted that the youth are aware, educated, creative, and uphold high values, reflecting the leadership's high expectations for their role in Saudi Vision 2030. Numerous empowerment initiatives, such as committees for small and medium enterprises, support funds, education, and entrepreneurship training, are primarily directed at the top-tier Saudi youths. A key objective of Vision 2030 is to reduce the crime rate so that the Kingdom can become an investment attraction for global companies in the Saudi market, which focuses on the youth category as a major factor in the Vision program (General Authority for Statistics, 2020).

In a nutshell, the current study is exploratory and aims to use graphology science for the early detection of criminality among youths in Hail City, Kingdom of Saudi Arabia. The research is paramount as there was no similitude of such a study in

Saudi Arabia in the past. The study outcomes will not only stand as a novelty in the criminology fora of the Kingdom but hopes to bridge the literature gap and assist in government policies locally, nationally, and even globally.

1.3 Research Questions

Research questions are always the key to guiding academic research (Blaikie, 2000). Hence, this research seeks to answer the following “what “questions:

1. What personality traits are revealed by graphology in detecting deviance among youths in Hail, Saudi Arabian society?
2. What are the graphology indicators that can be used to detect early deviant characteristics among youths in Hail, Saudi Arabia?
3. What are the connotations of graphology that identify Hell traits among deviant youths in Hail City, Saudi Arabia?

1.4 Research Objectives

General: The study aims to use graphology science in detecting early deviant characteristics among youths.

Specific: The specific objectives of the study are to:

1. Explain the personality traits revealed by graphology science in detecting early criminality among youths in Hail, Saudi Arabia.
2. Identify the graphology indicators that can be utilised in early crime detection among youths in Hail, Saudi Arabia.

3. Explore the connotations of graphology in determining the Hell traits among the deviant youths in Hail, Saudi Arabia.

1.5 Significance of the Study

One of the advantages of social science research is its ability to impact human society at all levels of life (Jonker & Pennink, 2010). Thus, a study of this nature is vital because criminality among the youths is of crucial concern to every responsible society, as they are the largest segment of society in the population of the Kingdom of Saudi Arabia, as mentioned earlier. This is because youths are the most important segment for any socio-politico-economic development. Therefore, there is no doubt that the study will benefit and influence government development policies in line with the Kingdom's Vision 2030 as it relies entirely on the youth category to achieve it with a low rate of crime.

In addition, the research would enlighten the public on the importance of graphology science as a means of crime detection, especially at the early stages of parenting during socialisation. Researchers, especially those in academics, would benefit, thereby widening their intellectual horizons for similar future research to be conducted for the benefit of all. In short, several personalities and organisations will benefit from the study due to its importance and the test of time, especially in the modern digital world of the 21st century.

1.6 Scope of the Study

The research focused on detecting criminality among the youths in the context of graphology science as an independent field of study within the paradigm of criminology. It looked specifically at the role(s) of handwriting in crime detection, particularly among the youths of Hail City in the Kingdom of Saudi Arabia. The

research never intended to study any aspect of criminality outside graphology. It is also within the study area, although examples of similar studies in some areas were cited herein.

1.7 Study Limitations

Most social science research have limitations mainly caused by inadequate resources at the researcher's disposal. Only Hail Province in the Kingdom of Saudi Arabia will be covered in this study. Secondly, only deviant youths incarcerated in Hail province correctional centre were interviewed. This was due to their optimum relevance to the study enterprise. Generally, the study is exploratory in nature. It is also meant for originality, knowledge-based, and qualitative techniques initiatives where practical situations are reported herein (Blaikie, 2010).

1.8 Brief Background of the Study Area

The Hail City is situated in the North, middle of the Kingdom of Saudi Arabia. It is flanked toward the North by Al Jouf, northern fringes toward the upper east, Al Qassim toward the south and Tabuk to the north, and Al Madinah Al Munawara toward the west (Zaidan et al., 2020). Thus, Hail Region is characterised by a strong centrality position and a concentration of people and has a high production capacity within the city and its surroundings. The geographical location advantages of the region provide it with a solid basis for growth in agricultural production and tourism.

The most historic trail in the Arabian Peninsula, the Zubeida Trail, traverses through the region's Eastern part. The presence of archaeological and heritage sites along this ancient pilgrimage trail provides an opportunity to develop a strong tourism industry within the region. It is essential to develop these sectors further to generate

multiple job opportunities, given that the population profile of the region is primarily young people under the age of 30 years.

The Prince Abdul-Aziz bin Musa 'ad Economic City (PABMEC) (announced in 2006) is situated on the city's Northern fringe, at the intersection of national highways connecting the region to Riyadh, Madinah, and further North. The main objective is to position the new city as the Middle East region's premier commerce, industry, transportation, and logistics hub (Abdulilah & Khan, 2019).

Therefore, Hail City is one of the most promising regions in Saudi Arabia through its evolving agricultural, commercial, economic, educational, and historical tourism activities. Nowadays, it is considered the northern capital of the kingdom because it provides job opportunities in various government and private sectors. Thus, it has become the city of attraction for work and living. The following Figure 1.1 portrays the study area and other parts of the Kingdom of Saudi Arabia. (El-Ezaby, 2019).

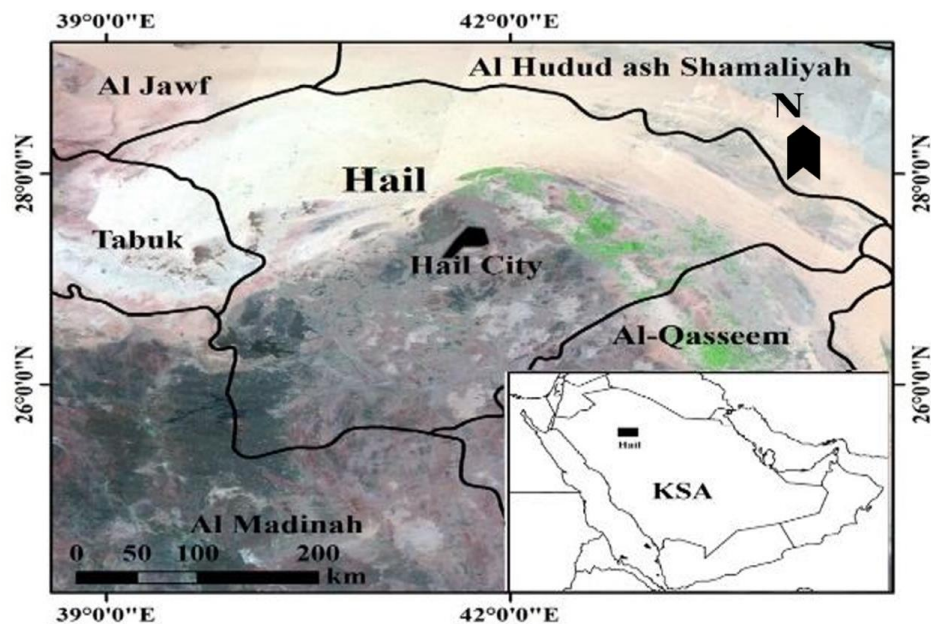


Figure 1.1 Map shows the study area Hail City (El-Ezaby, 2019).

Hail produces massive quantities of grains, dates, and fruit. The Hail region is the first wheat producer in the Kingdom of Saudi Arabia, where irrigation farming can be found 60 to 100 km to the northeast. Hail City is well known in Saudi Arabia and the Arab world for the generosity of its people. This is because it is the hometown of Hatim al-Tai (Hatim bin Abd Allah bin Saad Al-Tai was the ruling prince and poet of Arabia's Tay tribe). Stories about his extreme generosity made him an icon among the Arabs, as captured in the proverbial phrase "more generous than Hatim" attests.

The climate in Hail City is a hot desert, with hot summers and cool winters. Due to its higher altitude, it has milder weather than other Saudi cities. Hail City and many other regions in Saudi Arabia are divided into two distinct social systems: the desert (Bedouins/Rurales) and the urbanist (modern city lifestyle). Bedouins/Rurales are usually situated across the Hail region as it has the highest number of villages and towns among other Saudi regions. Thus, both are influenced by Arab tribal culture even today. And the social structure influences people's attitudes and plays a vital role in defining their dwelling spatial layouts and lifestyles. Regarding social and cultural issues, the final product of the dwelling is usually influenced by the degree of conservative social structure (Noaime et al., 2022).

1.8.1 The Hail Population

Hail is the capital city in north-western Saudi Arabia and the largest city of the Hail Region, with a population of about 746,046 (2020) (K. o. S. A. General Authority for Statistics, 2020). Hail is mainly an agricultural province with significant grains, dates, and fruit production. A large percentage of the kingdom's wheat production comes from Hail Province. To the northeast, 60 to 100 km (37 to 62 miles) away,

consist of irrigated gardens. Figure 1.2 below contains the entire population of the Hail region as at the middle of the year 2020.

Population by Age Groups , Nationality (Saudi/Non-Saudi) and Gender
Mid-Year 2020 **Hail Region**

فئات العمر	سعوديون Saudi			غير سعوديين Non-Saudi			الجملة Total		
	ذكور MALE	إناث FEMALE	جملة Total	ذكور MALE	إناث FEMALE	جملة Total	ذكور MALE	إناث FEMALE	جملة Total
4 - 0	28,824	29,293	58,117	2725	2380	5,105	31,549	31,673	63,222
9 - 5	29,427	28,848	58,275	3349	2737	6,086	32,776	31,585	64,361
14 - 10	27,266	25,914	53,180	2787	2084	4,871	30,053	27,998	58,051
19 - 15	26,641	25,702	52,343	2091	1372	3,463	28,732	27,074	55,806
24 - 20	28,945	28,051	56,996	4609	2233	6,842	33,554	30,284	63,838
29 - 25	24,127	26,190	50,317	13742	5888	19,630	37,869	32,078	69,947
34 - 30	21,886	24,084	45,970	16641	7131	23,772	38,527	31,215	69,742
39 - 35	19,342	21,226	40,568	26202	9726	35,928	45,544	30,952	76,496
44 - 40	17,190	18,855	36,045	25971	7931	33,902	43,161	26,786	69,947
49 - 45	13,981	14,697	28,678	17289	3343	20,632	31,270	18,040	49,310
54 - 50	11,088	11,279	22,367	10944	922	11,866	22,032	12,201	34,233
59 - 55	9,235	9,165	18,400	5441	487	5,928	14,676	9,652	24,328
64 - 60	7,443	8,354	15,797	2106	144	2,250	9,549	8,498	18,047
69 - 65	4,859	5,180	10,039	751	0	751	5,610	5,180	10,790
74 - 70	3,430	3,330	6,760	0	0	0	3,430	3,330	6,760
79 - 75	2,837	2,298	5,135	0	0	0	2,837	2,298	5,135
+ 80	2,860	3,173	6,033	0	0	0	2,860	3,173	6,033
الجملة	279381	285639	565020	134648	46378	181026	414029	332017	746046

Figure 1.2 Hail Population (General Authority for Statistics, 2020)

1.8.2 The Dominant Religion of People of Hail

The residents of the Hail region adhere to the religion of Islam, the Sunni sect, like the rest of the Kingdom's regions. This is not surprising as it is situated in a country (Kingdom of Saudi Arabia) serving as Islam's global birth home. Albeit visitors often come, the majority of the residents of the province are Muslims. All strangers and visitors must abide by Islamic rules during their stay in the area (Alnaim & Noaime, 2022).

1.9 Organization of Chapters

This thesis work is divided into six chapters. As an introductory section, Chapter One covered the general study guide. Chapter Two discusses the literature review related to the study, which then leads to a discussion on the theoretical framework of the study. Chapter Three outlines the research methodology. The findings of this study are presented in Chapter Five. The last chapter, Chapter 6,

discusses the major findings and provides a summary and conclusion of the study as well as recommendations for future studies.

1.10 Summary

The chapter discussed issues on why and how graphology science-themed research becomes essential in understanding youth deviance and or criminality in the Hail Province of the Kingdom of Saudi Arabia. The problem statement highlights the essential nature of the research type and its flexibility. Research questions were highlighted. Both general and specific research objectives were also presented as the basis of the research work. Meanwhile, the significance, scope, and limitations of the research were all contained in the chapter. A brief history of the study area was highlighted. Lastly, the thesis's sequential organisation of chapters was also included.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the relevant literature of the study on the subject matter, that is, the Role of Graphology in Early Detection of Criminality: A study among Youths in Hail, Kingdom of Saudi Arabia. The concept of crime, the concept of handwriting, the concept of personality, and the concept of criminal behaviour will be discussed. Furthermore, the revelation of personality traits through handwriting and the indicators of a criminal trend in youth through handwriting is clarified. In addition, the application of the graphology system to determine criminal behaviour in adolescence is also reviewed in this chapter.

2.2 The Concept of Crime

Crime is a wrongdoing that contravenes state law and is disapproved by society. The crime rate had not been very high in the olden days. However, as time went on, the crime rate went up alarmingly. This rise in the crime rate could be due to different causes and social problems. Crime is bad for the optimum survival of human society, albeit it has some logical importance.

Crime is viewed as an act of misconduct that violates state laws, and society strongly condemns it. Hence, it is a commission or omission prohibited by law and punishable by imprisonment or fine. Examples of crimes include murder, robbery, burglary, rape, drunk driving, child neglect, and failure to pay taxes. The expression "crime" comes from the Latin word "crimen," which means "offence" and a wrongdoer. Crime is considered an anti-social activity (Sowmyya, 2014).

Crime has the potential to be legal or illegal. Crime as unlawful misconduct violates the provisions of the criminal law of any rule of administration or code of the state. It is also viewed as a practice of wrongdoing and harmful to either the perpetrator himself or third parties. All acts of self-defence are legal and not punishable, although this depends on the legal approach and the terminology attached. Thus, scientific investigation vis-à-vis the nature, extent, causes, and control of criminal behaviour in both the individual and society is called criminology. For a crime to be carried out, the following seven elements are required to be present:

- i. *Men's rea*: means "guilty mind" in Latin. Criminal intent is an essential element for a crime to be committed.
- ii. *Actus reus*: means "culpable act" in Latin. For a crime to be committed, there should also be an external act and a criminal intention.
- iii. Injury/hurt: The criminal act should be accompanied by physical, mental, or monetary damage or hurt that violates state law (Sowmyya, 2014).
- iv. Causation: Every crime action must have a cause (stimulation). Several factors may cause crime depending on time, place, and circumstances. Crime causes are largely validated by crime causation theories such as differential association, differential opportunity, and situational drift (Siegel Larry, 2012).
- v. Legality: By law, every action is accepted unless and if where otherwise proven as anti-social behaviour. Legality signifies that law must

proscribe an activity as a crime. Thus, criminal behaviour generally must satisfy the content of being one before it is considered a crime.

- vi. Concurrency: Criminal action must coincide with the law's prescription. Actions are commensurate with the designated laws thereto.
- vii. Punishment: every criminal action attracts punishment. In their nature and applications, punishments differ depending on the gravity and harm the corresponding crime entails. Another branch of criminology dealing with that is referred to as penology.

For instance, an empirical study in India by Samyuktha and Sowmyya (2015) shows that the rising rate of crime is alarming. This is contained in the Bureau for National Crime Records archives of India. A report published by the Bureau for National Crime Tracks compared the 1953 and 2006 crime rates. The report noted a 79.84 percent decrease in burglary for 53 years and a 7.39 percent increase in murder. Kidnapping increased by 47.80%, robbery decreased by 28.85%, and riots decreased by 10.58%.

In 2006, 5,102,460 cognisable crimes were committed, including 1,878,293 Indian Penal Code (IPC) crimes and 3,224,167 Special & Local Laws (SLL) crimes, a 1.5 percent increase over 2005 (50,26,337). In 2006, the Indian Penal Code crime rate was 167.7 compared to 165.3 in 2005, showing a 1.5 percent increase over 2005, while in 2006, the SLL crime rate was 287.9 compared with 290.5 in 2005, showing a decline of 0.9 percent. Categorically, according to the statistical results presented, it indicates that there was a relative decrease in property crimes whilst there was an increase in violent crimes. As most research shows, these violent crimes are synonymous with youth life (Samyuktha & Sowmyya, 2015).

2.3 the Concepts of Handwriting and Graphology

Handwriting was used to define a person's personality and emotional state. A lot of random movements in the act of writing are being made. These gestures are captured on paper and represent emotions, which constantly change over time. This movement of registered handwriting is like an open window through which one can experience a personality's complete view. Handwriting is directly related to an individual's thinking process, like expression. It reacts to emotions such as sadness or enthusiasm in particular. Hence, one passes feelings onto paper during the writing process, and the words formed to represent those emotions of such a person (Samyuktha & Sowmyya, 2015).

Handwriting Analysis or Graphology is a scientific method used to define, analyse, and understand personality through handwriting-exposed strokes and patterns. Handwriting reveals the real personality over many other personality traits, including emotional outlay, anxiety, integrity, and protection. Handwriting Analysis is not a document review. It is often called brain-writing. It is a pattern of the neurological brain that represents the characteristic of personality (Hashemi et al., 2015).

Although it is seen as a modern development, the science of graphology is not new. For example, research in handwriting started over 400 years ago. Camillo Baldi is rightly referred to as the father of Graphology, as he was the one who made systematic observations on the manner of handwriting. For instance, in 1622, he wrote the first essay on Graphology. Abb Jean-Hippolyte Michon coined the concept of "graphology" in 1897 by combining two Greek terms "graphein" (to write) and "logos" (science). Thus, literally referred to as the science of writing (Kedar et al., 2015).