

# A System's Approach to Crime Prevention: The Case of Macao

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**Abstract** Macao has the world's largest casino industry and represents a unique political, social, and cultural system that differs significantly from Western societies. The overall crime rate in Macao is relatively low. Scholarly knowledge about crime and crime prevention in Macao, however, is very limited. This paper first reviews crime prevention theories, typologies, and various strategies in Western societies, followed by an introduction and discussion of crime prevention practices in Macao. Crime prevention strategies in Macao may be characterized as a tripod structure with three major supporting legs: traditional criminal justice practices, social prevention beyond the criminal justice system, and situational crime prevention measures. The paper then discusses the factors that may contribute to the low level of crime in Macao and points out the direction for future research in Macao.

**Keywords** Crime prevention · Situational crime prevention · Social crime prevention · Macao

## Introduction

Crime prevention has been a long discussed topic in the criminological field, especially in Western societies. Scholarly knowledge about crime and crime prevention in the Chinese context, however, is very limited. Such knowledge in Macao, a Special Administrative Region of China, is even less. Our paper intends to discuss and introduce the major crime prevention strategies implemented in Macao to the international world by applying Western theories and crime prevention typologies. There are several reasons for studying crime prevention in Macao.

First, Macao represents a unique political, social, and cultural system that differs significantly from Western societies. Macao is located in southern China and has a population of over 542,000, a total land area of 29.5 sq. km, and a coastline of 47.2 km. Macao is among cities with the highest population density in the world (Macao Department of Statistics and Census Service 2011). The city is well known for its casino gambling industry. The citizens

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are well paid for their work and adequately housed (Yearbook of Statistics 2000–2009). The casino industry on the one hand attracts tourists, creates job opportunities, and pays taxes to the government; on the other hand, it produces gambling-related problems including crimes such as illegal gambling and loan sharking. Macao was a Portuguese colony for over four centuries before the handover to mainland Chinese jurisdiction in 1999.<sup>1</sup> After the handover, it largely retained the Portuguese legal tradition. Meanwhile, approximately 95% of Macao residents are Chinese. Chinese culture and conventions are also well represented. Currently, Macao is administered under the “one country, two systems” policy. Such a unique political, social, and cultural background makes it particularly important to study crime and crime prevention in Macao.

Second, compared with many modern metropolitan cities around the world, Macao is “a peaceful, safe city with a low crime rate” (Macao 2007–2009). Although comparative study on crime rates is a challenging task primarily due to the fact that crimes are defined differently across jurisdictions, it is possible to conduct some rough comparisons. In 2009, Macao’s rate of crimes against persons was 462 per 100,000 inhabitants and the rate of crimes against property was 1,192 per 100,000 inhabitants. Both crime rates were much lower than comparable middle-size cities (with a population of 500,000 to 999,999) in the United States, which had a violent crime rate of 878 per 100,000 inhabitants and a property crime rate of 4,894 per 100,000 inhabitants that same year (Federal Bureau of Investigation 2009). Macao’s crime rates were comparable to its neighboring city, Hong Kong, which is known for its low crime rates. Taking homicide and arson into consideration, there were fewer controversial crimes in terms of their definitions, for example, in 2009 the homicide rate in Macao was 0.92 per 100,000 inhabitants and the arson rate was 8.3 per 100,000 inhabitants (Macao Judiciary Police 2009).<sup>2</sup> Hong Kong’s homicide rate was 0.67 per 100,000 inhabitants and the arson rate was 9.6 per 100,000 inhabitants (Liu and Zhao 2011).

The low level of crime is also indicated by the residents’ confidence in public safety, in the government, and in the justice system. The Public Confidence Index Report (2011) shows that approximately two-thirds of the residents express confidence and satisfaction with public safety in Macao. This level of confidence in public safety is the highest among all public confidence indexes.<sup>3</sup> It is therefore necessary to examine crime prevention strategies in Macao and to learn how these contribute to the low level of crime.

In addition, it is often difficult for Western scholars to gain a thorough knowledge on crime and crime prevention strategies in the Chinese context due to the lack of up-to-date data sources and language barriers to working on original materials (Liu et al. 2001). In the following section, we first review the theoretical framework and crime prevention strategies implemented in Western societies and then introduce and discuss major crime prevention measures in Macao.

<sup>1</sup> The official claim that Macao was a colony of Portugal was documented in the Sino-Portuguese Treaty of Amity and Commerce in 1887, but the colonial influence of the Portuguese commenced as early as 1553 when the officials of the local government of Canton Province granted the Portuguese the right of temporary stay in Macao for trading businesses during the trading season (Huang 1999; Deng et al 2000). According to the agreement, the Portuguese had to leave Macao as soon as the trading season was over. In 1557, however, the Portuguese built permanent houses and settled down in Macao (Huang 1999; Deng et al 2000). Later, more Portuguese settled down in Macao bringing with them Portuguese culture and legal traditions. In December 2009, Macao was returned to China (Macao SAR Government Portal 2010).

<sup>2</sup> Macao’s official crime statistics do not report violent crime as a whole. Violent crime is included in crime against persons. Crime against persons as reported in (Macao) Yearbook of Statistics include homicide, assault, crimes against personal freedom, sexual offenses, libel, and crimes against privacy.

<sup>3</sup> The public confidence indices include confidence in the government, public safety, social stability, the courts, the legislature, the Chief Executive, other residents, the economy, personal economic conditions, governmental departments and social institutions, and satisfaction in public transportation.

## Theories and Research on Crime Prevention

### Definition and Crime Prevention Typologies

Scholars hold different opinions on the definition of crime prevention. Brantingham and Faust (1976) describe it as “the most overworked and least understood concept in contemporary criminology” (p. 284). Some scholars concentrate on strategies conducted outside the criminal justice system (van Dijk 1990; Sutton et al. 2008). A second group of scholars holds a broader opinion that crime prevention covers measures that fall somewhere between the narrow craft of policing and somewhat amorphous processes of social control (Crawford 1998). A third opinion indicates that crime prevention may cover “any activity, by an individual or a group, public or private, that precludes the incidence of one or more criminal acts” (Brantingham and Faust 1976: 284; Lab 2008). The latter two definitions encompass a broader scope of crime prevention, which involves not only the formal criminal justice activities but also activities by individuals and social groups outside the criminal justice system.

Scholars have also made efforts to differentiate the concepts of crime prevention and crime control. Worrall (2006) argues that prevention “carries connotations of a proactive approach that seeks to stop crime before it can occur” (p. 2). Crime control, in comparison, is more reactive to crimes that have already occurred. Similar to Worrall’s definition, Carroll et al. (2010) refer to crime control as dominated by traditional police law enforcement activities that are reactive and that are top–down responses to crime. Crime prevention, on the other hand, is an outreach measure that encourages community involvement in police work and citizen responsibility for public safety in the community (Carroll et al. 2010). Accordingly, crime prevention, with community policing as a major strategy, is proactive and is considered as a bottom–up tactic. However, many forms of crime control are also methods of crime prevention (Worrall 2006). For example, a prison sentence can be both reactive and preventive. It is reactive because there would be no prison sentence if there were no crime; it is preventive in the sense that it may deter would-be offenders (Ekblom 1994; Weatherburn 2002; Worrall 2006).

Crime prevention strategies vary quite significantly throughout the world. Various typologies have been formulated, but two tend to dominate: one drawn on experience in the medical and public health field, while the other emerged from and was shaped by debates within criminology (Sutton et al. 2008). The medical and public health model focuses on the individual’s levels of risks to commit crimes: (1) primary prevention, directed at modification of criminogenic conditions in the physical and social environment at large; (2) secondary prevention, directed at early identification and intervention in the lives of individuals or groups in criminogenic circumstances; and (3) tertiary prevention, directed at prevention of recidivism (Brantingham and Faust 1976). The model is further developed by a number of scholars, who add a second dimension to identify if the audiences/target of crime prevention are collectivities/groups or individuals (Rosenbaum 1988<sup>4</sup>; van Dijk and de Waard 1991<sup>5</sup>; Crawford 1998).

The “criminological” classification argued that the most enduring distinction between types of crime prevention measures is that between social and situational approaches

<sup>4</sup> Rosenbaum (1988) identifies three fields of potential victims in relation to: personal protection, household protection, and neighborhood protection.

<sup>5</sup> van Dijk and de Waard (1991) make a distinction between situational, offender-oriented and victim-oriented measures.

(Crawford 1998; Sutton et al. 2008). In general, social crime prevention is primarily concerned with measures aimed at tackling the root causes (“risk” and “protective factors”) of crime and the dispositions of individuals to offend; situational crime prevention, by contrast, places an emphasis on addressing the target and guardianship aspects of crime. It involves the management, design or manipulation of the immediate physical environment so as to reduce the opportunities for crime commission (Farrington and Welsh 2008; Brantingham and Brantingham 2005; Tonry and Farrington 1995).

Further, a number of scholars make an effort to integrate the “public health” model with the “criminological” classification and try to place specific crime prevention strategies into one of the six categories as shown in Table 1 (see Crawford 1998; Sutton, et al. 2008). The major difference between Crawford (1998) and Sutton et al. (2008) is that Sutton et al.’s typology places a heavy emphasis on alternative measures to law and order. Crawford, in contrast, embraces both criminal justice prevention measures and practices outside of the criminal justice system.

In sum, despite different typologies of crime prevention strategies in the previous literature, overlaps exist among them. For example, a prison sentence can be both a social prevention and a tertiary prevention that targets the existing offenders. In the current paper, we do not intend to further the discussion on crime prevention typologies. Rather, we consider crime prevention typologies an important basis in understanding theories and practices of various crime prevention strategies. Moreover, they are helpful in understanding crime prevention strategies in Macao, a Special Administrative Region (SAR) of China. In order to facilitate understanding of crime prevention measures in Macao, we opt to use a simplified “criminological” classification scheme of social and situational prevention.

## Theories of Crime Prevention

Many crime prevention strategies are theory-based. Gottfredson and Hirschi (1995) argue that nothing is more dangerous than a policy justified only by the ambitions of politicians and bureaucrats. The proper response is to return to social theory and research. Wikstrom and Torsetensson (1999) also point out that “if crime prevention measures are to be successful they need to be underpinned by a knowledge-based theory regarding the individual and the ecological factors which lead individuals to commit crimes” (p. 465). Theories make it possible to understand which social conditions and changes in society may affect crime levels and what strategies should be developed to prevent crime from occurring. In addition, they create a common ground for collaboration between the criminal justice agencies, organizations, communities, and individuals in crime prevention.

## Social Prevention

Social prevention is primarily concerned with measures aimed at tackling the root causes of crime and the dispositions of individuals to offend (Graham and Bennett 1995; Sutton 1994). It involves both criminal justice approaches<sup>6</sup> and approaches beyond the criminal justice system, such as strategies implemented by communities, schools, households, and individuals, as well as collaboration with the criminal justice system in tackling crime (Crawford 1998; Sutton et al. 2008).

<sup>6</sup> According to Sutton et al. (2008), criminal justice responses, such as arrest, imprisonment and other forms of punishment, have some deterrent and incapacitative effects and could be regarded as social prevention applied at the tertiary phase (i.e. after an offence has occurred).

**Table 1** Crime prevention typology and examples by Crawford (1998) and Sutton et al. (2008)

	Primary	Secondary	Tertiary
Social	Education and socialization. Programs to give all children a “headstart” before they encounter formal school systems.	Programs targeting “at risk” teenagers, the unemployed, community regeneration.	Tougher sentences for selected crimes.
	Public awareness and advertising campaigns	School truancy reduction schemes.	Initiatives to help released prisoners secure paid jobs.
	Initiatives to support parents.		Behavior-change programs for recidivist sex offenders.
Situational	Incorporation of prevention principles into urban planning and design of residential complexes.	Installation of alarms. Use of routine patrols or special surveillance.	Incapacitation.
	General prevention advice for householders, businesses.	Neighborhood watch in “at risk” neighborhood.	Closure of high-risk crime areas.
	Target-hardening and surveillance		Installation of bulletproof glass and CCTV in banks with records of repeat victimization.

First, criminal justice prevention refers to traditional deterrent, incapacitative, and rehabilitative strategies operated by law enforcement and the criminal justice agencies (Farrington and Welsh 2008). This type of crime prevention is largely based on the deterrence theory. This theory assumes that criminals or would-be-criminals will stop committing crimes when faced with the threat of serious sanctions or apprehension. Policing practices based on this theory include hiring more police, removing supposed procedural restraints, reducing policing downtime, and rapid response to crimes, etc. (Worrall 2006). One of the classic studies of this kind in the United States was the Kansas City Preventive Patrol Experiment conducted during 1972 and 1973, which found that the level of patrol had no effect on crimes, such as burglaries, auto thefts, larcenies involving auto accessories, robberies, and vandalism, which are supposed to be suppressed by patrols. This study was later criticized and challenged for its methodological inadequacy (Larson 1975; Marvell and Moody 1996). Later studies found that higher levels of police patrols do have a relationship with crime rates in a city (Marvell and Moody 1996; Kovandzic and Sloan 2002). In addition to the police practices, which are based on the deterrence theory, the courts, correctional agencies, and legislative units respond to crime using a variety of approaches under the deterrence theoretical framework. Those strategies include pretrial preventive detention, setting bail at a high level, post-trial incapacitation, bans on firearm possessions, tough sentencing (such as mandatory sentences and capital punishment), etc.

Other criminological theories may also contribute to the development of criminal justice prevention strategies. For example, the practice of segregating offenders in correctional facilities derives from social learning theory; the medical model of criminal justice originates from the idea of biological trait theories; criminal justice policies that decriminalize victimless crime and diversion programs that avoid stigmatizing juveniles are connected to labeling theory (Lanier and Henry 2004).

Second, scholars argue that crime prevention as an important broad social issue has been ignored in the past (Lab 2008; Colvin 1991; Schwendinger and Schwendinger

1993; Tonry and Farrington 1995), due largely to the fact that problems of crime have been left mainly in the hands of the police and other criminal justice system agencies (Lab 2008; Gilling 1994). Individuals and groups of the criminal justice system lack the expertise, training, resources, and orientation needed to uncover and address the underlying causes of social problems (Lab 2008). Social prevention outside the criminal justice system is based on the analysis that takes the root cause of crime as the target and tries to eradicate it at an early stage. According to such an analysis, varieties of criminological theories fall under this framework and contribute to the development of crime prevention strategies.

Crawford (1998) identifies two broad theoretical frameworks to understand crime prevention strategies: control theory and strain theory. Control theory, as developed by Hirschi (1969) and further extended by Gottfredson and Hirschi (1990) in their general theory of crime, explains why people conform, rather than why they commit crime. Each of the four elements in Hirschi's social control theory—attachment, commitment, involvement and belief—represents a significant social bond to conventional values. The stronger the social bonds an individual has, the more likely s/he will conform to convention and social norms. In other words, when social bonds are weak, the particular individual is less likely to conform and the stake of committing crime increases (Hirschi 1969). The theory suggests that supporting and strengthening traditional institutions, such as families and schools, and youths' early socialization are fundamental aspects of crime prevention. Measures that advocate for "early-in-life interventions" are related to the control theories, especially general theories of crime.

A second theory is strain theory. The theory originated from Robert Merton (1938) and was further developed by Albert Cohen (1955) and Cloward and Ohlin (1960). It emphasizes the disjuncture between culturally defined goals and lack of opportunities for everyone to achieve these goals. Strain arises as the result of this disjuncture. According to this theory, crime prevention strategies should focus on both opportunity structures and treatment of delinquency at the group or community level. The assumption is that those who are provided with opportunities will more likely achieve culturally defined goals and, as a result, are less likely to seek illegal means to achieve success. Crime prevention strategies derived from strain theory include providing economic opportunities and creating educational programs for lower class people.

In addition to social control and strain theories, social policies that keep children away from negative peer influences may be linked to social learning theory. Strategies that strengthen community organization and facilitation of the processes of assimilating immigrants into mainstream society are well connected to social disorganization theory. All these theories that stress the root causes of crime provide a solid basis for crime prevention policies and practices.

Based on these theories, scholars have identified a set of criminal "risk factors" that include gender, age, family influences, school impact, and peer influences (Crawford 1998; Farrington and Welsh 2008; Lab 2008). These "risk factors" indicate that social institutions, such as family, school, and communities, play important roles in crime prevention and reducing "at-risk" behavior. For example, Worrall (2006) points out that, at the individual level, individuals should avoid high risk behaviors; at the aggregate level, the family and household approaches should aim not only to minimize negative influences in the home, including domestic violence and child abuse, but also to discourage children from becoming criminals through parental care, education, as well as governmental financial assistance to families. In addition, school-based/educational crime prevention targets student-based problem solving (such as meeting with teachers and police officers to discuss

problem-solving strategies), normative education, separate classrooms for at-risk youth, and vocational training, etc.

At the community level, attention is paid to the role of community as a unique unit in preventing crimes. Community prevention refers to interventions designed to change the social conditions and institutions, such as families, peers, social norms, clubs, and organizations, that influence offending in residential communities (Hope 1995; Farrington and Welsh 2008). It emphasizes citizen support and participation in crime prevention (Lab 2008). Specific strategies include financial assistance to communities (for more opportunities), efforts to mobilize citizens, anti-gang initiatives, after-school programs, youth mentoring programs (to strengthen youths' attachment to conventional values), neighborhood watch, and so on and so forth.

In spite of their respective importance, various social prevention strategies are not isolated entities that function to reduce crime. An entire range of interventions need to be undertaken at the same time (Lab 2008). For example, a good education coupled with no job prospects leads to nowhere; instead it necessitates a support network from the community, school, family, and broader social infrastructure.

Social prevention of crime, especially outside the criminal justice system, has been questioned for its ability to present significant and immediate payoffs in a short period of time due to the fact it intends to make major changes in society (Lab 2008; Gilling 1994; Rosenbaum 1991). Furthermore, it is uncertain whether making major social changes will greatly reduce crime. Some scholars, therefore, argue that crime prevention that focuses on individual decision-making and situations pertinent to crime will probably provide a more immediate result in reducing crime (Brantingham and Brantingham 2005; Walsh 2003). In addition, there is a more fluid interface between academic study and practical applications of situational crime prevention (Townesley et al. 2008).

### Situational Crime Prevention

Situational crime prevention is an evolving field of criminological study. It was initially developed as a concept in the 1980s by Ronald V. Clarke who characterized it as being directed at specific crimes, including manipulations of the environment, and being focused on reducing the opportunities and rewards for crime (Clarke 1983). Recognition of the importance of situational crime prevention has grown in recent years (Lee 2010; Townesley et al. 2008; Brantingham and Brantingham 2005; Felson 2002). Felson (2002) argues that situational crime prevention today includes at least 16 categories of prevention and there are more than 100 case studies. Over time, the elements of situational crime prevention have been expanded, modified, and refined, but essentially its content remains focused on identifying and addressing the situational context of criminal events in crime prevention instead of understanding the principal causes of criminal predispositions (Walsh 2003).

Situational crime prevention relies on several theories including a primarily rational choice perspective and routine activities theory (Exum et al. 2010). First of all, rational choice theory suggests that criminals weigh the costs and benefits of criminal offenses. Crimes may be discouraged if environmental barriers draw the attention of the suspicious individuals and increase the possibility of them being punished (Worrall 2006; Sutton et al. 2008; Walsh 2003; Cornish and Clarke 1986, 2003).

Routine activity theory, which arises from the rational choice perspective, proposes three elements that may contribute to crime: suitable targets, motivated offenders, and the absence of capable guardians (Cohen and Felson 1979). When the three elements coincide,

crime may occur. Crime prevention strategies thus target these three elements in preventing crimes from happening (Clarke and Felson 1993).

Built on these theoretical frameworks and as a result of evolving development, situational crime prevention now involves five major approaches: increasing the perceived efforts associated with crime commission; increasing perceived risks of detection; reducing perceived rewards; reducing provocation; and removing excuses (Sutton et al. 2008; Worrall 2006; Walsh 2003; Comish and Clarke 2003; Wortley 2001). Situational crime prevention has been modified, expanded, and refined. It may be applied not only to general categories of crime but also to particular crime types (Clarke 1997; Farrell 2010); it is “not limited to physical designs and includes recognition of the emotional and psychological processes involved in criminal decision making” (Lee 2010: 264). It further “disaggregates the conceptualization of these psychological motivations by stipulating strategies based on reducing provocations and removing excuses” (Lee 2010: 264). Situational crime prevention is also supportive of evidence-based approaches in their construction of specific crime reduction interventions (Brantingham and Brantingham 2005). Situational crime prevention measures are effective because they are a practical, cost-effective, permanent alteration to the physical environment that is tailored to fit specific types of crime (Walsh 2003).

### Crime Prevention in Macao

In line with the “criminological” typology, Macao’s crime prevention strategies include both social crime prevention strategies (including both criminal justice prevention and strategies beyond traditional criminal justice practices) and situational crime prevention strategies. In the sections that follows, we first describe the research context including the political, socio-economic, and cultural systems of Macao, followed by a discussion of the crime patterns in Macao and a comprehensive review of crime prevention strategies.

#### Research Context in Macao

Macao is experiencing rapid economic growth and modernization processes. It has developed a strong economy related to the casino industry. By the end of 2007, Macao’s GDP per capita ranked No.1 in Asia and No.20 globally (Chen 2009). In 2010, Macao’s GDP per capita was 276,028 Macao patacas (equivalent to 34,504 US dollars); median local residents’ monthly income was 9,000 patacas (equivalent to 1,125 US dollars/month); the overall unemployment rate was 2.7% (Macao Department of Statistics and Census Service 2011).<sup>7</sup> The casino industry promotes economic development and at the same time may produce gambling related issues including crime in Macao.

The well-maintained economic conditions warrant the development of a social welfare system in Macao. Macao exercises a dual social security system, which covers a compulsory scheme to meet the basic social security need and a voluntary scheme to satisfy a higher level of demand. The Social Welfare Bureau of Macao provides various types of services/programs to help individual residents and their families with their economic predicaments, health issues, and drug abuse problems. For example, the Wealth

<sup>7</sup> In Hong Kong, the GDP per capita was 247,332 Hong Kong dollars (equivalent to 30,917 US dollars); average local residents’ monthly income was approximately 11,500 HK dollars (equivalent to 1,438 US dollars/month); and the overall unemployment rate was 3.7% (Hong Kong Census and Statistics Department, 2010).

Partaking Scheme and the Healthcare Subsidy Scheme are implemented every year to improve Macao residents' economic conditions and help solve healthcare issues<sup>8</sup> (Social Welfare Bureau 2009). Where education is concerned, Macao implements a 15-year compulsory education scheme, which covers education from three years of kindergarten to high school education.

Macao is known for its multiculturalism. Chinese culture is dominated by Confucian principles that emphasize the importance of building a harmonious society. Meanwhile, a variety of religious beliefs co-exist. Buddhism is most popular, followed by Catholicism, Protestant Christianity, Islamism, Bahai, and other religions. Many religious beliefs have certain commonly shared norms about moral behavior to regulate their disciples' behavior. Statistics show that by the end of 2008 Macao had 31 schools sponsored by the Catholic church. These schools had a student population of more than 32,000. In addition, the Catholic church sponsored 24 social welfare institutions, including eight kindergartens, six nursing homes and medical clinics, four centers to assist injured or disabled people, and six residential homes for delinquent youth. The total number of beneficiaries reached 1,727 (Macao 2007–2009).

In addition, population movement, especially non-resident workers and migrants to Macao, are frequent. In 2009, 33,205 non-resident workers entered Macao. The overall non-resident workers reached 74,905 persons by the end of the year. The number of immigrants from Mainland China with "One-way Exit Permit" was 3,121. In 2010, the number non-resident workers who entered Macao increased to 35,508 and the number of overall non-resident workers reached 75,813 by the end of the year. The number of Mainland immigrants increased to 9,056 (Macao Department of Statistics and Census Service 2011).

In short, social contextual factors in Macao involves factors that may elevate crime, such as rapid economic growth (especially the development of the casino industry) and a large number of immigrants, and other factors that may contribute to the low level of crime, such as a low unemployment rate and the long-term (15 years) compulsory education system. Given this complex social context, the question is how to explain the low level of crime in Macao. What crime prevention strategies are being implemented in Macao?

### Crime Patterns and Trends in Macao

Accurately measuring crime is a challenging task. Due to the facts that both victimization surveys and self-report studies are not available in Macao and that no one has challenged the validity of Macao official crime statistics, we present and explain crime patterns using the official police data.

The Macao Penal Code (1995) classifies crimes into five major categories, which include crimes against persons, property crimes, crimes against life in society, crimes against territory, and crimes against peacefulness and humanity. Drug-related crimes are stipulated by a separate law on Prohibition of Illegal Production, Trafficking, and Abuse of Narcotic and Psychotropic Drugs. The classification of crimes in the Macao Penal Code is quite different from that in Western societies. Taking the United States as an example, violent crime as reported by the Federal Bureau of Investigation includes mainly four major index crimes: murder, forcible rape, robbery and aggravated assault; property crime consists of burglary, larceny-theft, motor vehicle theft, and arson. Comparatively, in Macao major violent crimes are contained in the category of crime against persons, which consists of a broader set of crimes, such as homicide, assault, sexual offences, crimes against personal

<sup>8</sup> This scheme started in 2005.

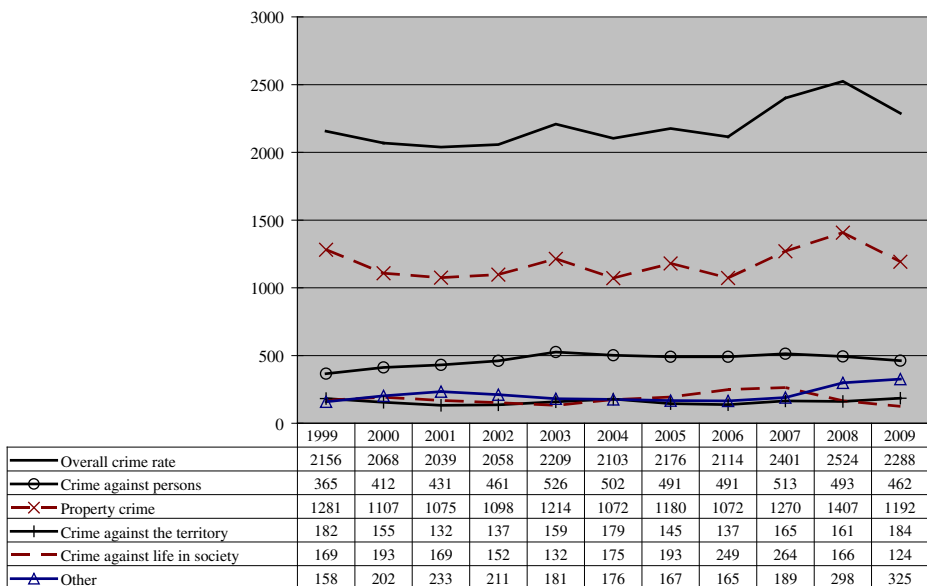
freedom, libel, and crimes against privacy. Property crime covers such crimes as burglary and crimes against general property. Disparate crime definitions and reporting systems make it difficult to conduct accurate comparisons of crime rates between Macao and other societies.

In the past 10 years, the overall crime rate in Macao fluctuated and reached a peak in 2008 (see Fig. 1); it dropped significantly in 2009. Specifically, the overall crime rate increased from 2,156 per 100,000 inhabitants in 1999 to 2,288 per 100,000 inhabitants in 2009. Property crime rates were largely consistent with this trend while crimes against persons showed a steady increase from 365 per 100,000 inhabitants in 1999 to 526 per 100,000 inhabitants in 2003; they started to decline since 2004. Although the rate of crime against persons in 2009 (462 per 100,000) decreased compared to 2008 (493 per 100,000), it was still higher than that in 1999 (365 per 100,000).

Among all crimes, a prominent crime type is gambling-related crime as defined by the Judiciary Police. Surveys results indicate that the development of the casino industry in Macao may have produced various kinds of gambling-related issues, including crime and problem gambling. Official crime statistics show that the number of gambling-related crimes increased from 444 cases in 2002 to 1,601 cases in 2009. The number in 2009 was more than triple that in 2002 (see Fig. 2). The Judiciary Police of Macao has created a special department to deal with both gambling-related crimes and economic crime investigations.

### Criminal Justice Prevention as a Type of Social Crime Prevention in Macao

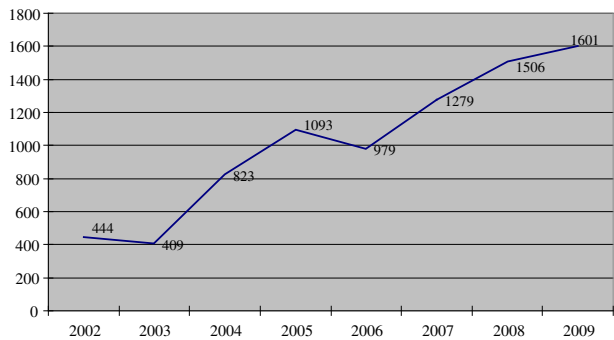
Criminal justice prevention measures in Macao aim to punish and rehabilitate existing offenders and meanwhile deter would-be offenders. This type of crime prevention is



Data source: Macao Yearbook of Statistics, 1999–2009

**Fig. 1** Crime rates in Macao (per 100, 000 inhabitants), 1999–2009

**Fig. 2** Overall number of gaming-related crimes in Macao, 2002–2009. Data source: Macao Judiciary Police Annual Reports, 2003–2009



performed primarily by police in their law enforcement activities. Macao has two major police forces: the Public Security Police and the Judiciary Police, both of which are under the direct central command of the Unitary Police Service.

First, the Public Security Police force has more than 3,700 policemen and a number of affiliated units including the Resource Management department, Information Department, Operations Department, Immigration Department, Traffic Department, City/Island Police Departments, Tactical Police Unit, Logistic Support Department, Police Academy, Disciplinary Office, and Police Band (Macao 2007–2009). The Public Security Police is primarily responsible for maintaining public order and guaranteeing performance of fundamental civil rights and personal freedom. It takes various measures to prevent crime, especially organized crime and serious violent crime; its officers patrol the streets and public places on a daily basis; it protects public safety when there are public gatherings, protests, or celebrations; it ensures that road and traffic regulations are properly followed; it executes and supervises immigration policies; it may conduct preventive or reactive detention against the suspect or offender until relevant criminal police officers arrive to take over the case. Among all the departments under the Public Security Police, the Tactical Unit is responsible for combating criminals, especially those using firearms, and taking actions when there is serious violence, including cases involving sniper attacks or hostage-taking (Macao 2007–2009).

A unique measure taken by the Public Security Police in Macao is “police warning” in cases involving juveniles who are first-time offenders committing only minor offenses. “Police warning” is considered a non-judiciary measure to divert delinquent juveniles who are aged 12–16 years according to the Education and Supervision Regulation of Delinquent Youth of Macao Yearbook (2007–2009). “Police warning” is a measure of prevention in that it educates delinquent juveniles about the negative result of their wrongdoings in a solemn and just manner and prevents delinquent juveniles from committing future crimes. Meanwhile, the non-judiciary nature of the measure helps minimize stigma associated with the delinquent youth.

Second, the Judiciary Police has a staff of over 750 and a number of subordinate units including the Criminal Investigation Department, the Department for the Investigation of Gaming-related and Economic Crimes, the Forensic Science Department, the IT and Telecommunications Coordination Department, the Management and Planning Department, the Judiciary Police Training School, The Criminal intelligence Division, and the sub-bureau of INTERPOL Macao. The Judiciary Police is primarily responsible for crime prevention and criminal investigation. It is committed to providing investigative support to the judicial authorities (Macao Judiciary Police 2011). In 2009, it received 10,927 cases,

among which 2,318 were serious criminal cases, including 5 homicide cases, 5 crimes against personal freedom, 40 extortion cases, 45 arson cases, 147 loan-sharking cases, 3 organized criminal cases, 99 drug trafficking cases, 221 robbery cases, and 1,733 theft cases (Judiciary Police 2009). Among all the criminal offenders, 1,869 were sent to the Public Prosecutions Office for further criminal proceedings.

Due to the fact that Macao's economy is heavily dependent on the casino industry and tourism, the Judiciary Police established the Department of the Investigation of Gaming-related and Economic Crimes to handle investigation of gaming-related and economic crimes with an unknown culprit liable to a maximum penalty of imprisonment term exceeding 3 years. The major responsibility of the Department is to prevent and investigate such crimes as illegal gambling, loan-sharking, and crimes in casinos, fraud, and abuse of trust and writing of bad checks. All these crimes may be considered as "gaming-related crimes" because they are "crimes committed inside casinos, rooms and gaming venues, or at their surroundings, providing that such crimes are related to gambling" (Macao Judiciary Police 2011).

Under the command of the Unitary Police, the Public Security Police and the Judiciary Police cooperated and implemented a series of strategies to maintain public order and combat crime in addition to their routinely conducted law enforcement activities. These strategies include a variety of intensive police campaigns against crimes, such as the "Winter Prevention" campaign targeting all types of crimes (2009), a six-day crackdown of all types of crimes (2007), doubling efforts to fight terrorism and money-laundering (2007), and implementation of the largest anti-triad operation (by the Public Security Police in 2005) (Macao Yearbook 2007–2009).

Macao police are also actively involved in long-term collaboration with neighboring police departments in Guangdong Province and Hong Kong to combat crimes in Macao and across the borders. Such collaboration includes a series of large cross-border initiatives including the "Thunderbolt" and the "Glaring Sun" anti-crime operations. The "Thunderbolt" is a joint action launched since 2007. In 2009, the "Thunderbolt" emphasized such crimes as prostitution, drug trafficking, illegal gambling, theft, robbery, illegal hotel, and all crimes concerning gangsterdom. The action lasted for a month during which police searches and patrols of public areas were reinforced. More than 200 suspects of illegal behavior were taken to the police department for further investigation (Judiciary Police 2009).

Criminal justice prevention by the criminal justice system also concerns the work of the Public Prosecutions Office, the Courts, and the correctional system. Different from the United States and other Western societies, where the prosecutor's office operates as an administrative organ, the Macao Public Prosecutions Office is a judicial organ and plays an important role in criminal proceedings. Three levels of prosecutorial magistrates including the Prosecutor General, Assistant Prosecutors General, and Prosecutors act as the representatives in three levels of courts respectively by participating in judicial proceedings. The Prosecutions Office's important duty is to "combat crime and protect public interest through exercising the power of prosecution" (Macao Public Prosecutions Office 2010). The three-level court system, namely the primary/administrative court, the court of second instance, and the court of final appeal, embodies the independent judicial authority and final adjudication authority granted to Macao by the central government of China. The court system of Macao is responsible for the trial of criminal and civil cases. Crime prevention at this level is primarily realized through criminal punishment and deterrence.

Macao has only one prison. The prison by Western definition also serves as a jail. It incarcerates not only offenders who are convicted of felony offenses and serve long-term sentences in prison, but also those who serve short periods of time, i.e., a year or a few months, and those on remand. There are two sections in the Macao prison: a male section

and a female section. Attached to each section are two sub-sections, one for those who are detained in custody and the other for convicts. The offenders are screened at intake and classified into three levels, high security rating, semi-trusted, and trusted, according to their dangerousness. The Prison has the right to setup special detention zones in other locations for inmates who need to be separated from the general prison population. The Macao correctional system makes social rehabilitation one of its major tasks. The Macao prison, along with the Macao Youth Detention Center, and the Department of Social Rehabilitation<sup>9</sup> provide offenders with opportunities to participate in job training, education, cultural entertainment, and sports activities to facilitate reentry processes.

In addition to traditional criminal justice agencies, the Macao Customs Service tackles customs fraud and unlawful trafficking, safeguards intellectual property rights, and enhances Macao's international reputation (Macao Yearbook 2007–2009). Overall, different components of the Macao criminal justice system specialize and collaborate to fight crimes and meanwhile prevent future crimes from taking place (see Fig. 3).

### Legislative Support for Crime Prevention

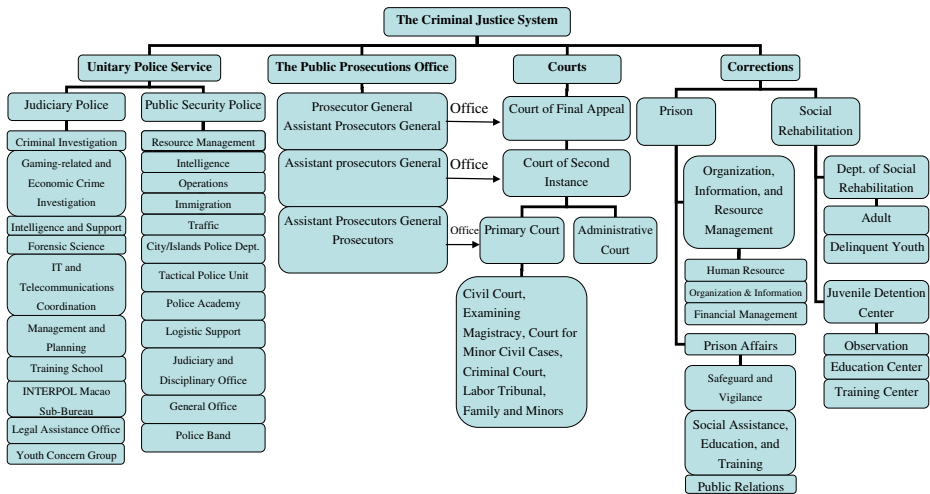
The criminal justice system subordinates to nothing but the law. Under the Basic Law, the Macao SAR enjoys independent judicial power, including the power of final adjudication. The authoritative framework of Macao's legal system consists of five codes: the Penal Code, Criminal Procedural Code, Civil Code, Civil Procedural Code and Commercial Code (Macao 2007–2009).

Macao's criminal justice system is organized on the basis of the Penal Code of 1995. Along with the Penal Code, a set of laws and regulations dealing with specific types of crimes provide solid legislative foundation for crime control and prevention. The Penal Code of 1995 stipulates the basic principles of criminal punishment and defines crimes and punishments for each type of criminal offenses. The Penal Code rules no death penalty and life sentence in Macao. The maximum sentencing length is 30 years in prison for certain extreme cases. Other laws and regulations in Macao target either particular types of crimes or specific types of offenders. Specifically, these laws cover human trafficking and smuggling, money laundering, organized crime, terrorism, illegal gambling, youth crimes, computer crime, and drug offenses (Table 2 lists the laws for specific types of crimes. The list is not exhaustive).

### Social Prevention Beyond Traditional Criminal Justice Practices

Social prevention that goes beyond the traditional criminal justice practices emphasizes community and citizen participation in crime prevention. In order to promote the awareness of crime and involvement in crime prevention by the communities and citizens, both the Public Security Police and the Judiciary Police carry out community policing activities (Public Security Police 2011; Macao Judiciary Police 2011). They conduct various activities to disseminate crime prevention tips through media announcements, official police website publications, face-to-face conferences with local communities, lectures to the general public, and posters in public areas including public transportation areas. For example, tourists and local residents are informed through the official website of the Judiciary Police that the following constitutes illegal gambling behavior:

<sup>9</sup> The department of Social Rehabilitation and the Juvenile Detention Center are under the leadership of the Legal Affairs Office of Macao.



**Fig. 3** Operation model of the criminal justice system in Macao

1. own or manage any gambling parlors without valid permits;
2. gamble or appear in any such unauthorized sites;
3. operate illegal mah-jong parlors or gamble in any such sites;
4. sell unauthorized lottery tickets or raffle tickets;
5. gamble in public;
6. bookmaking;
7. perform any kind of gambling activities in private areas, causing nuisance and disturbance to neighbors after midnight.

In addition to providing general crime and crime-specific prevention tips, the Police–Community Relations Research Group of the Judiciary Police collects information about police–community relations and studies issues of concern; it encourages interactions

**Table 2** Laws regarding specific types of crimes

Law	Area
1995 (Year)	Macao Penal Code
No.8/96/M	Control Mechanism of Illegal Gambling
No.6/97/M	Control of Organized Crimes
No.9/2002	Internal Security Law (with one chapter regulating prevention measures, especially for police)
No.44/2003	Organization and Operation of Office for Supervision and Coordination of Casinos
No.2/2006	Prevention and Control of Money Laundering
No.3/2006	Prevention of Terrorism
No.7/2006	Preventive Measures against Money Laundering and Terrorism
No.2/2007	Education and Supervision Mechanism for Delinquent Youth
No.6/2008	Prevention and Striking of Human Trafficking and Smuggling
No.17/2009	Prohibition of Illegal Production, Trafficking, and Abuse of Narcotic and Psychotropic Drugs
No.11/2009	Combating Computer Crime Law
No.2/2009	Maintenance of National Safety Law

between the police, communities, and citizens in their involvement in crime prevention (Macao 2007–2009).

Special attention is given to juvenile crimes. In order to prevent these, the Judiciary Police formed the Youth Concern Group, which consists of one inspector, two investigators, and two social workers. They together are responsible for studying juvenile crime patterns and consequently develop appropriate proposals for juvenile crime prevention. In addition, the Youth Concern Group develops close relationship with schools and youth associations, promotes information exchanges, and learns about up-to-date issues that exist among young people. It educates and guides young people to develop healthy lifestyles, follow conventional values, and stay away from crime through lectures, seminars, and other promotional programs. Schools and families actively participate in these crime prevention activities. In 2009, in collaboration with schools and families, the Youth Concern Group held 61 seminars and organized 22 student tours of police facilities. It also provided individual crime prevention counseling to 22 at-risk/delinquent youths. The police, the communities, and the families share common responsibilities in preventing juvenile delinquency in Macao (Judiciary Police 2009).

A large part of Macao is occupied by high-rise buildings. A unique measure which ensures community/resident involvement in crime prevention was the establishment of the “High-rise Building Crime Prevention Team” which was organized by the Judiciary Police to assist crime prevention work in residential and business areas. The team members frequently visit high-rise buildings, especially during winter holidays. They disseminate crime prevention information by giving out fliers with specific crime prevention tips to residents and hold meetings with property management companies, edifice security personnel, and residents. The outcome has been positive: the number of citizens’ reports of crimes and other safety issues to the police has been increasing, and edifice security personnel and residents also believe that police visits have had a deterrent effect on crime (Judiciary Police 2011).

Social prevention programs are organized not only by police departments but also by non-government organizations, such as religious groups. Taking drug rehabilitation as an example, in addition to the drug treatment and rehabilitation centers organized by the Social Welfare Bureau, the Health Department or Macao prison, a number of such centers are organized by religious groups including the Christian New Life Fellowship of Macao, St. Stephen’s House of Promise, and the Teen Challenge Christian Drug Rehabilitation Center. Most religious drug rehabilitation centers emphasize family participation and non-drug therapy to change drug abusers’ personal qualities and help them rehabilitate. Drug treatment and rehabilitation centers are also organized by other social institutions such as the Association of Rehabilitation of Drug Abusers of Macao and the Drug Rehabilitation and Mutual Benefit Association (Macao Social Services 2011).

Some social programs are not designed to prevent crimes; they may, however, have a side effect on reducing crimes. A survey conducted by the Gaming Management Program of the University of Macao reveals that 2.66 percent of the interviewed students may be pathological gamblers and 5 percent may be problem gamblers (Chen 2009). The rate of pathological gambling is higher (6%) among youths who are neither in school nor employed<sup>10</sup> (Youth Indicators of Macao 2010). In response to the problem, the Macao government advocates “responsible gambling” to promote social responsibility in casino businesses. The casino entrepreneurs and firms must bear necessary social responsibilities such as obeying regulations on legal working hours, improving working environments,

<sup>10</sup> Compared with those who are either in school or employed.

raising wages, respecting human rights, and preventing casino visitors from becoming pathological gamblers, etc. (Chen 2009). Meanwhile, pathological gamblers are encouraged to seek help from several pathological gambling treatment centers. As early as 2003, the Macao government initiated a discussion on organizing a counseling group for problem gamblers. In 2005, the Social Work Agency organized a counseling center for problem gamblers and their family members, followed by the launch of another center in 2006. An anti-gambling campaign was organized by Macao's Protestant churches in 2007. In the same year, the Anglican Church launched its problem gambling counseling program. None of these programs are designed for the purpose of reducing crimes; however, by providing treatment to the problem/pathological gamblers, the programs may have a side effect in reducing gambling-related crimes in Macao.

### Situational Crime Prevention

In addition to social prevention strategies conducted by the criminal justice system, through police–community cooperation, and by other social institutions, Macao has implemented a set of situational crime prevention measures. These measures focus on increasing the effort required to commit a crime, increasing the risks of committing a crime, reducing the reward derived from crime, reducing provocation, and removing excuses for committing crimes. Because situational crime prevention strategies cover a wide range, the present paper provides and discusses only a few examples for each of the five types. Considering that the development of the casino industry in Macao may produce crime (Chen 2009), many of the situational crime prevention measures are related to security issues in casinos and their surrounding areas.

First, various activities conducted by the High-rise Building Crime Prevention Team under the Judiciary Police help increase the effort required to commit crimes. With help from the Crime Prevention Team, the property management staff of high-rise buildings put up posters in the public areas of the buildings to caution residents about crime prevention. Specific target-hardening measures include locking the doors and windows when leaving rooms, immediate reporting of any crime or crime-related issues in the building, and use of surveillance devices in the public areas (especially in the building entrance, in the elevators, and commercial areas), etc.

A second example of increasing the effort required to commit crime involves prohibition of certain types of people from entering gaming rooms/parlors in casinos. In order to prevent possible gambling-related crimes, No.16/2001 Casino Administration Law, Article 24, prohibits six types of people from entering gambling rooms or parlors in Casinos:

- youth under age of 18;
- persons with no competence, quasi-interdicted persons, maliciously bankrupted persons, except those who regain their rights;
- public employees, except those with special permission or those conducting work-related tasks;
- casino employees who are not on duty (entrance is prohibited only to the casino which is the place of employment);
- those who are intoxicated (under the influence of alcohol or drugs);
- those who carry firearms, explosive devices, and visual or audio devices.

Under this Casino Administration Law, much effort is required for illegitimate groups of people to obtain viable false identification documents or special permission to enter gaming areas.

Second, in order to increase risks associated with criminal activity, Macao police departments send out policemen to be stationed 24 hours per day outside each large-scale casino and those with large streams of visitors. During holidays, police preventive patrols around casino areas become more frequent and patrol personnel are reinforced. This strategy to a certain degree prevents gambling-related crimes from taking place. Frequent and active presence of police officers raises the risk of criminals being caught (Marvell and Moody 1996), which may then decrease the crime rate and make citizens feel safer (Zhao et al. 2002).

An increase in the risks of offending may come from natural surveillance or from artificial surveillance such as the use of closed-circuit televisions (CCTV) surveillance system (Brantingham and Brantingham 2005). The development of the casino industry in Macao brings with it a large number of hotels, pawn shops, jewelry stores, and luxury stores. It is a common practice for these stores and hotels to install CCTVs for crime prevention. CCTVs are also installed in other business and public areas, including banks, office buildings, traffic stops, museums, and street corners. The prevalent use of CCTV security and surveillance system increases risks for criminal offenders.

Third, reducing reward is a frequent component in crime prevention approaches tied to property crime (Brantingham and Brantingham 2005). An example of such an approach in Macao is the replacement of valuable merchandise on display with its empty packaging. This strategy is often used in commercial business areas, such as department stores, drug stores, electronic shops, and grocery stores.

Fourth, reducing provocation is also an important component in situational crime prevention. This approach in Macao includes police delivery of seminars on “knowing the law and abiding by the law” to young people in schools and the “Say NO to Drugs” activities conducted by the Neighborhood Mutual Benefit Association (Judiciary Police 2009).

Lastly, a common approach to remove excuses is to set rules to make it difficult for someone to use “but I didn’t know” as an excuse for criminal behavior (Brantingham and Brantingham 2005). The rule that prohibits anyone under the age of 18 from entering the gaming area of a casino may also be considered an example of this kind.

In sum, various crime prevention techniques are implemented in Macao. A large portion of them involve situational crime prevention. Certain strategies can be considered as both social prevention and situational crime prevention measures. The criminal justice system, communities, and residents share common responsibilities in crime prevention.

## Discussion and Conclusion

Crime is a complex phenomenon with a complex etiology (Brantingham and Brantingham 2005). Among all crime prevention approaches, a popular trend is situational crime prevention. A possible reason for situational crime prevention outgrowing other forms of crime prevention may be due to its immediacy, which is not found in other forms of social prevention (Clarke 2005). The underlying point is that a comprehensive crime prevention policy should look beyond this immediacy and embrace different disciplines and share responsibilities (Dale 2008). Approaches to develop a comprehensive crime prevention mechanism are evidence-based, which makes use of whatever works best for crime prevention. This method embraces different disciplines and abandons measures which prove to be ineffective based on the idea that “we are all entitled to our own opinions, but not to our own facts” (Sherman 1998: 4). The question then is “what works to prevent crime?”

Welsh and Farrington (2007) reported 13 systematic reviews of different crime prevention strategies in the US and the UK focusing on four domains: at-risk children, offenders, victims, and places. The reviews represent the leading source of scientific knowledge on what works best to prevent crime in the four domains. Evidence from these 13 systematic reviews shows that: (1) for children, child social skill training is a promising approach to crime prevention; (2) the more intensive programs like therapeutic communities are more effective in reducing recidivism and drug use than those not as intensive; (3) restorative justice is found to be effective in reducing offender recidivism as well as victims' retaliation against their offenders; and (4) CCTV may be more effective when combined with other interventions and focused on a specific crime type. Welsh and Farrington then suggest what works best for crime reduction is to expand the use of hot spots policing, cognitive-behavioral treatment for offenders, and incarceration-based drug treatment for substance-abusing offenders as part of overall police and correctional policy. Farrington and Welsh (2008) suggest that high-quality evaluations of the effectiveness of crime reduction programs be conducted in all countries.

Compared with the US and the UK, there is very little evidence-based research in developing nations and it seldom follows rigorous scientific methods (Bowles et al. 2005). Research in developing nations is largely descriptive or qualitative rather than evidence-based (Visher and Weisburd 1998; Welsh and Farrington 2001; Bowles et al. 2005). Bowles et al. (2005) summarized and commented on the findings from a review of 90 studies published between 1980 and 2002 on the effectiveness of crime prevention programs and practices in developing countries. They found that much of the research is curiosity-driven rather than policy-driven and that it produces few qualitative results of sufficient quality to contribute to an "evidence base" (Bowles et al. 2005: 348). The barriers for doing high-quality, evidence-based research are three-pronged: a lack of empirical information about the functioning of criminal justice institutions; a lack of articulation of policy options and policy objectives; and a lack of articulation of the inputs, outputs and outcomes associated with interventions and of the raw material for estimating the costs and benefits associated with interventions (Bowles et al. 2005).

Overall, evidence found for the effectiveness of crime prevention strategies is mixed. Comparison of the results between countries is unlikely due to social and cultural differences as well as methodological, epistemological, and conceptual flaws. Effective strategies in one society may not be replicable and effective at all in another because the level and structure of criminality is subject to considerable local variations (Wikstrom and Torsetensson 1999; Farrington and Welsh 2008). It is thus important that crime-prevention work be based on a description of the problem profile prevailing locally (Wikstrom and Torsetensson 1999). A better understanding of crime prevention strategies should cover the rich contexts and local settings in which the strategies are applied.

Although many crime prevention practices in Macao may be addressed according to Western theoretical frameworks, no systematic and scientific evaluation work has been conducted for the design of the programs and to assess the effectiveness of crime prevention strategies. It therefore remains unknown as to which situational or social prevention programs or strategies work better and to what extent the various crime prevention strategies in Macao account for the low level of crimes. Due to the lack of data and evidence, we summarize the following possible factors that may contribute to the low level of crime in Macao.

Crime prevention in Macao is comprehensive and it covers both social prevention measures and situational crime prevention strategies. On the one hand, the criminal justice system, communities, and citizens share common responsibilities in crime prevention. On

the other hand, situational crime prevention measures are ubiquitously applied in Macao. The integration of both social prevention and situational crime prevention strategies probably generates a long-term influence on individual behavior as well as an immediate effect on crime rates in Macao. In addition, a set of social contextual factors including economic conditions, the social welfare system, the educational system, and cultural systems work together to have an impact on crime rates in Macao.

Overall, crime prevention measures in Macao are comprehensive, but not as complex as those in many Western societies where scientific and systematic studies are conducted to examine the effectiveness and efficiency of crime prevention programs. Such studies are not currently being undertaken in Macao, probably due to the lack of awareness of the importance of building a scientifically based crime prevention system and the lack of qualified professionals who can take on the task. A recent development in this regard is the launch of the first criminology graduate program in University of Macau in 2009. The objective of the program is to improve the operation and effectiveness of criminal justice agencies in Macao and China by providing well-trained and highly skilled professionals for the criminal justice agencies and crime prevention programs. This is a step forward toward building a scientific, evidence-based crime prevention system in Macao.

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