Systematic Review of the Social, Psychological and Economic Factors Relating to Involvement and Recruitment into Organized Crime

Tommaso Comunale, Francesco Calderoni, Martina Marchesi, Elisa Superchi, and Gian Maria Campedelli

Background: Recruitment into Organized Crime

Organized crime (henceforth OC) differs from general and serious crime due to the higher complexity of the criminal activities, often requiring a network of transnational contacts to identify suitable and trustworthy co-offenders or contacts with the legal world (Cornish and Clarke 2002; Kleemans and De Poot 2008). The relevance of social ties among OC offenders and the social environment constitutes the heart of early studies on criminal organizations as the mafias (Albini 1971; Cressey 1969; Ianni 1974). The social embeddedness of OC drove more recent analyses on the sociocultural processes shaping recruitment pathways and criminal careers of OC offenders (Kleemans and De Poot 2008; Kleemans and Van de Bunt 1999, 2008; Kleemans and Van Koppen 2014). The complex dynamics underlying individuals' involvement into OC have contributed to the resilience of organized crime groups (henceforth OCGs), one of their most distinct features. The ability of rapidly reorganizing and constantly recruiting new members has also favored the consolidation of OCGs in some geographic areas (e.g. the mafias in Italy). Literature on recruitment into OC has not only focused on social factors for involvement into OCGs, but scientific enquiries have also investigated psychological (Ostrosky et al. 2012) and economic factors (Lavezzi 2008, 2014).

As for social factors, people get involved into OC through social and work ties.[1] Social ties with co-offenders and with the legal world play a central role in the success of OC-related activities. Furthermore, social ties may create a "social snowball effect",

---

[1] Involvement into OC also takes place through leisure activities, because of life events or through deliberate recruitment by criminal organizations. For more details, see Kleemans and Van Koppen (2014).

T. Comunale (✉) · F. Calderoni · M. Marchesi · E. Superchi · G. M. Campedelli
Università Cattolica del Sacro Cuore and Transcrime, Milan, Italy
e-mail: tommaso.comunale@unicatt.it

a process in which people get involved in OC through people that are close to them (Kleemans and Van Koppen 2014, p. 288). Relations between individuals bridge social and criminal networks – also across countries – providing new criminal opportunities and solve problems of cooperation in hostile environments in which offenders carry out illegal activities. Opportunities for committing OC may also arise through work ties. Occupation settings offer good opportunities to gain trust in someone else, essential for activities involving financial and other risks. For instance, working in the mobility, transport, and logistics sector may provide opportunities for cross-border OC activities. Criminal co-operations therefore may be established through peoples' international contacts and travel movements; through their individual freedom of movement; and through their occupations enabling them to meet with potential co-offenders (Kleemans and Van de Bunt 2008). Once part of a criminal network, one's criminal career can take different paths depending on his/her roles and responsibilities. In this regard, Kleemans and de Poot (2008) highlight four major roles: offenders with strong local roots, individuals specialized in some activities, individuals obtaining increasing roles through capital accumulation, and offenders who possess specific skills or expertise that make the other offenders dependent from them. For these reasons, recruitment into OCGs and criminal careers can also take place during adulthood among late starters – i.e. adult members with no previous criminal involvement (Kleemans and Van Koppen 2014). Thus, a career in OC does not necessarily start in early adolescence, where individual characteristics and long-term risk factors may serve as an explanation for a lifetime involvement in crime.

Psychological factors have also been assumed to influence individuals' recruitment into OCGs. Information on psychological traits of OC offenders, however, is limited because of the relatively small population, which is difficult to reach also in contexts of detention. Prior studies about OC relied on the Psychopathy Check List-Revised (Ostrosky et al. 2012), a controversial instrument resting on the contested concept of psychopathy, bearing a number of limitations (Jones et al. 2013). Other neuroscientific tools such as neuropsychological and genetic tests, as well as neuroimaging, are widely used in courts to explain and sometimes justify criminal behavior (Walsh and Beaver 2009). To advance the understanding of the psychological determinants of criminal behavior, such tools might be adopted for criminological purposes. Moreover, when investigating the psychological factors for the recruitment into OCGs, researchers may also take into consideration other types of disorders, e.g. substance abuse disorders, low self-control and/or a history of past disorders and negative development.

Economic risk factors have also emerged as relevant in addressing the processes shaping individuals' recruitment into OCGs. Lavezzi (2008, 2014), for instance, identified several aspects that make Sicily's economy vulnerable to OC penetration. Extortion and protection are common in Sicily, whose economy is characterized by a large proportion of small firms, large sectors of traditional/low-tech economic activity, a large construction sector, and a large public sector (Lavezzi 2008). Opportunities for OCGs also emerge from impairments to the rule of law and the presence of illegal and informal markets (Bandiera 2003). Fluctuations and irregularities in the credit markets, for example, may create opportunities for usury. In addition, inequality has been indicated as a possible facilitator in the emergence of OCGs. Data from Italian regions show a remarkable correlation between high-

income inequality and the spread of OC (Daniele 2009). The majority of scientific studies has focused on the relation between economic risk factors and OC at the macro-level, but economic disadvantages can also influence the individuals' propensity to join OCGs (Carvalho and Soares 2016).

Despite the increasing number of studies on several aspects of OC, to date little systematized information is available on the social, psychological and economic factors that lead to involvement in OC. This systematic review embraces a broad perspective encompassing several aspects related to recruitment into OCGs (e.g. age, gender, social ties, economic conditions, criminal background and skills).[2]

In line with these purposes, this systematic review firstly aims at identifying the current knowledge on social, psychological, and economic factors relating to recruitment to OCGs. It will also highlight whether these factors are independent of one other or they are correlated. Secondly, this review aims at assessing the validity and generalizability of research findings of studies employing different research methods and focusing on different countries. In this regard, this systematic review seeks to answer two sets of research questions:

- *What are the most commonly reported social, psychological, and economic factors leading to criminalisation and recruitment into OC networks? Are them to be viewed independently of one another?*
- *Which methods do included studies apply? Are finding consistent through studies employing different methods and adopting different geographic scopes?*

The systematic assessment of the empirical evidence on such factors contributes to the consolidation of the knowledge on involvement into OC and may inform the policy making process. In addition, research findings will serve to set direction for future enquiries aimed at revealing the underlying dynamics of recruitment into OCGs.

Methodology

Operational Definitions of Organized Crime

This study aims at revealing the factors associated with recruitment into OC. The concept of recruitment refers to the different processes leading individuals to the stable involvement into OCGs. While this interpretation is broader than the formal affiliation to any OCG, it excludes individuals occasionally cooperating or co-offending with OCGs.

---

[2] Previous systematic reviews have focused on youth gang membership and interventions (Hodgkinson et al. 2009; Klein and Maxson 2006). The Campbell Collaboration, for example, has published two systematic reviews on the involvement of young people in gangs (Fisher et al. 2008a, b), and more recently one on predictors of youth gang membership in low- and middle-income countries (Higginson et al. 2014). These reviews did not consider the factors relating to membership in other types of groups involved in crime, namely OCGs.

As for organized crime, divergent approaches adopted by governments and poli-cymakers for long resulted in the difficulty to produce a uniform definition (see Paoli 2014a).

This systematic review adopts the definition of organized crime (OC) by the United Nations Convention against Transnational Organized Crime (United Nations 2000, p. 5):

> *'Organized criminal' group shall mean a structured group of three or more persons, exist-ing for a period of time and acting in concert with the aim of committing one or more seri-ous crimes or offences established in accordance with this Convention, in order to obtain, directly or indirectly, a financial or other material benefit.*

The UN definition is generally accepted from a legal perspective, though some scholars have criticized it for being rather generic and unspecific (Albrecht and Fijnaut 2002; Paoli 2014a). Despite limitations, the UN definition encompasses dif-ferent forms of OC, allowing this systematic review to include several types of OCGs: mafias, DTOs, gangs, and a residual category labelled "other criminal organizations".

Mafias are characterized by a remarkable longevity, an organizational and cul-tural complexity enforcing the respect of the code of silence (i.e. omertà). In addi-tion, mafias' ability to control legitimate markets and to exercise a political dominion over their areas of settlement, frequently using private violence and simultaneously supplying protection against extortion, competitors and law enforcement (Finckenauer 2007; Gambetta 1993; Paoli 2014b; Varese 2010). DTOs are complex organizations involved in the production, transport and/or distribution of large quantities of illicit drugs through a business-like structure (Clapper 2015; Knox and Gray 2014; U.S. Department of Justice 2010). As regards to gangs, given the impor-tant share of adult offenders in OC and the relevance of the ties to the legitimate world, this study excludes youth (street) gangs and prison gangs in favor of criminal gangs composed of adults with different degrees of organizational structure.[3] This study therefore considers "criminal gangs" those groups of adults following a code of conduct, having common beliefs and existing in a semi- structured organization oriented to accomplish their goals through criminal activity (Langston 2003). Lastly, the label "other criminal organizations" encompasses different groups that "utilize violence or threats of violence, provide illicit goods that are in public demand, and assure immunity for their operators through corruption and enforcement" (Hagan 2015, p. 395). These comprise for instance outlaw motorcycle gangs and other OCGs active in specific world regions (e.g. the Balkans).

---

[3] This choice is also due to the fact that the literature generally considers youth street gangs as dif-ferent from OCGs (Decker and Pyrooz 2014). Furthermore, a recent systematic review has already assessed the factors leading to youth gang membership (Higginson et al. 2014). Similarly, while there is a relevant literature on prison gangs, this field is mostly separate from the literature on OC, which emphasizes the social embeddedness and the role of ties with the legitimate world. Prison gangs, on the contrary, occur in a specific and institutionalized settings and recruitment is influ-enced by contextual factors (Blevins et al. 2010; Wood et al. 2014).

Search Strategy and Selection of the Relevant Studies

This systematic review relies on academic and grey literature retrieved from 12 electronic databases in English, French, German, Italian, and Spanish.[4] The databases include different research fields, without limitations as to their year of publication or geographic origin.

A three-fold query structure incorporated information on social, psychological, and economic factors relating to the recruitment into mafias, DTOs, gangs, and other criminal organizations. The queries combined search terms from each of the three main categories, i.e. type of OCGs, the type of factors, and recruitment. The Boolean operator "OR" connected keywords of the same category, while the Boolean operator "AND" connected keywords from different categories. This query structure ensured the collection of all the studies indexed in the electronic databases containing at least one term from each semantic category.

The search led to the collection of 48,731 unique studies. A systematic screening of these studies selected the relevant information according to shared eligibility criteria. Firstly, a team of trained researchers screened the titles and abstracts of each study to include only the literature making an original research contribution (e.g. excluding news articles or reviews of any type) to the social, psychological, and economic factors relating to the recruitment into OCGs. Of the initial studies, 118 met the inclusion criteria. This initial list of studies was then integrated with additional literature from their bibliographies, as well as with the suggestions of several experts in the field of OC.[5] These activities led to a total of 130 studies available for full-text screening. Secondly, the full-text screening further selected the studies according to stricter criteria. Only empirical studies were included. Of the remaining 57 empirical studies, 47 studies had a clear research aim and an appropriate research methodology, design, recruitment strategy, and data collection.[6]

This systematic review included studies adopting quantitative, qualitative, or mixed-methods approaches. Systematic reviews have generally excluded qualitative research although there has been much debate on its incorporation (see Dixon-

---

[4] *English:* Criminal Justice Abstracts; Open Grey; Social Sciences Premium, NJCRS, PsycInfo, Abi/Inform, International Bibliography of the Social Sciences, Public Health Database, Military Database, EconLit, PsycArticles; PubMed; Scopus; Web of Science. *French:* Google Scholar; Sudoc.Abes. *German:* Sowiport. *Italian:* Riviste Web. *Spanish:* Liliacs; Latin America & Iberia Database.

Dutch was excluded from the search as contacts with Dutch scholars confirmed that empirical studies in this field have also been published in English.

[5] The experts that contributed to this systematic review are: Jay Albanese (Virginia Commonwealth University, USA), Paolo Campana (University of Cambridge, UK), Scott Decker (Arizona State University, USA), Edward Kleemans (Vrije University of Amsterdam, NL), Klaus Von Lampe (John Jay College of Criminal Justice, USA), Carlo Morselli (University of Montreal, CA), Letizia Paoli (Katholieke Universiteit Leuven, BE), David Pyrooz (University of Colorado Boulder, USA), Sonja Wolf (Centro de Investigación y Docencia Económicas, MEX).

[6] The included studies meet the quality criteria set out by an adapted version of the Critical Appraisal Skills Programme (2017) for qualitative studies.

Woods et al. 2006). The reason relies on the fact that systematic reviews aim at studying correlates and risk factors–or at addressing the effectiveness of intervention programs–which require quantitative studies as the primary basis (for risk factors, see Murray et al. 2009). Excluding qualitative contributions from the review, however, could have impacted the research findings, as an important amount of organized crime studies employ either qualitative or mixed-methods approaches. This systematic review therefore considered the inclusion of such methods to provide a more comprehensive, albeit descriptive, overview about the factors leading to recruitment into OCGs.[7]

In addition, this study relied on grey literature to validate the research findings. Inclusion of grey literature allows to "take into account some important contextual information, without losing the level of rigor required for a systematic review" (Benzies et al. 2006, p. 59). The grey literature considered all available reports issued by the Italian governmental, judicial, and law enforcement institutions on the presence of the Italian mafias in Italy and abroad, namely the Italian Parliamentary Anti-Mafia Commission (CPA), the Italian National Anti-Mafia and Counterterrorism Directorate (DNA), and Anti-Mafia Investigative Directorate (DIA). These sources are relevant as the mafias have some peculiarities differentiating them from the other types of OCGs. Only reports containing relevant information for the purposes of this review were used to corroborate results, namely 8 reports issued by the CPA, 9 by the DNA, and 23 by the DIA.

Results

Description of the Included Studies

The included studies were published between 1969 and 2017, spanning different geographical regions and languages. They also differ according to the type of sources: 6% (n = 3) are dissertations, 36% (n = 17) are books or chapters, and 58% (n = 27) are journal articles. The articles come from 19 journals, mostly pertaining to criminology and related fields of studies.[8] The included studies also differ regard-

---

[7] This systematic review was conducted following in part the guidelines provided by the Campbell Collaboration–an international research network promoting and producing systematic reviews–as Campbell reviews are based solely on quantitative findings as primary basis for conclusions. For more details, see https://www.campbellcollaboration.org/library/campbell-collaboration-systematic-reviews-policies-and-guidelines.html

[8] The journals are: British Journal of Criminology; Crime Law & Social Change; Trends in Organized Crime; European Journal of Criminology; Global Crime; Canadian Journal of Criminology; Criminal Behaviour and Mental Health; Criminology; European Sociological Review; International Journal of Social Psychology; Journal of Criminal Justice; Journal of Economic Behavior & Organization; Justice Policy Journal; Law & Society Review; Policing: An International Journal of Police Strategies & Management; Research and Reports in Forensic Medical Science; Revista Electrónica de Ciencia Penal y Criminología; Social Problems; The Howard Journal of Crime and Justice.

ing the type of OCGs they focus on. Almost half (42%, n = 20) deal with the mafias, especially with the Italian ones, 30% (n = 14) discuss about other criminal organization, above all Dutch ones, and the remaining about gangs (15%, n = 7), and DTOs (13%, n = 6).

The selected studies rely on different types of data collection and methods of analysis. In investigating the social, psychological, and economic factors relating to the recruitment into OCGs, they use both primary and secondary data, and often the combination of the two (Fig. 1, on the left). Due to the difficulties to study the recruitment into OCGs, almost half of the studies (49%, n = 23) relied on the information coming from official data, investigative and judicial files, as well as other documents (e.g. bibliographies and tapes). The remaining half of the studies either integrated information from secondary data with interviews (23%, n = 11), or conducted their research entirely through surveys, interviews, and conversations with informants (28%, n = 13).

The studies applied different methods of analysis (Fig. 1, on the right). More than half of them (57%, n = 27) favored a qualitative approach in dealing with the topic of factors relating to the recruitment into OCGs. The remaining adopted either quantitative (26%, n = 12) or mixed-methods approaches (17%, n = 8) (see Tables 1, 2, and 3, respectively). The scarcity of quantitative studies may be due to the topic of the research itself, i.e. the recruitment into OCGs, is not particularly suitable for such methodological approach. The quantitative approach is further hindered by the difficulties in operationalizing and measuring the social, psychological, and economic factors intervening in the recruiting process.

■ Primary data ■ Quantitative
■ Secondary data ■ Qualitative
■ Primary and secondary data ■ Mixed-methods
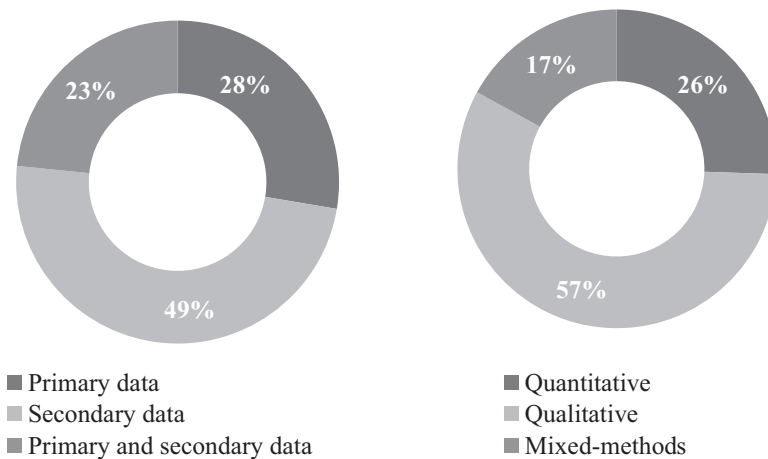
Source: authors' elaboration of the studies included in this systematic review.

Fig. 1 Types of data collection and methods of analysis (n = 47). (Source: authors' elaboration of the studies included in this systematic review.)

Table 1 Details on the included quantitative studies

Source	Type of OCG	Sample[a]	Data collection	Data analysis	Categories of factors	Geographic scope	Relevant findings
Blokland et al. (2017)	Other Criminal Organizations	601	Official data	Descriptive statistics T-test Chi square Logistic regression	Age Criminal background and skills	Netherlands	Outlaw motorcycle gangs' membership is positively associated with previous criminal records
Carvalho and Soares (2016)	DTOs	230	Interviews	Descriptive statistics Mincerian regression	Age Ethnicity Educational background Economic conditions	Brazil	Individuals join DTOs for monetary returns
Jhi and Gerber (2015)	Gangs	190	Survey	Descriptive statistics Logistic regression	Employment Economic conditions	U.S.	Gang membership is positively associated with unemployment
Kirby et al. (2016)	Other Criminal Organizations	4109	Official data	Descriptive statistics Chi square Kruskal-Wallis test	Age Gender Ethnicity Criminal background and skills	U.K.	Compared with general crime offenders, OC offenders are more predominantly male, more ethnically heterogeneous and with more drug offences records
Kissner and Pyrooz (2009)	Gangs	200	Interviews	Logistic regression	Age Social ties Psychological factors	U.S.	Persistent gang involvement is associated with poor self-control
May (2009)	Gangs	138	Survey	Descriptive statistics Correlation Logistic regression	Group identity Psychological factors	U.S.	Gangs constitute a form of social support for members

Study	Type	Sample	Data source	Methods	Factors	Country	Findings
Ostrosky et al. (2012)	OCGs & DTOs	82	Interviews; Documents	Descriptive statistics	Age, Economic conditions, Psychological factors	Mexico	Individuals join DTOs seeking for higher economic income and a lifestyle characterized by the accumulation/showing off of material values
Requena et al. (2014)	OCGs	200	Investigative files	Descriptive statistics	Gender, Social ties, Silence/*Omertà*	Spain	Women get involved in OCGs through their personal networks, i.e. family ties and emotional ties
Salinas and Regadera (2016)	OCGs	2384	Investigative files	Descriptive statistics	Age, Gender, Ethnicity, Social ties, Criminal background and skills	Spain	Individuals get involved in OCGs because they possess special expertise developed outside the criminal world
Schimmenti et al. (2014)	Mafias	69	Interviews	Descriptive statistics, T-test, Chi square, Logistic regression	Psychological factors	Italy	High levels of antisocial traits and low levels of interpersonal-affective traits of psychopathy characterize mafia members
Unlu and Ekici (2012)	DTOs	230	Investigative files	Descriptive statistics, Chi square	Age, Gender, Economic conditions	Turkey	Male adults from low-income societies can join DTOs and work as couriers for monetary returns
Wang (2013)	DTOs	222	Interviews	Content analysis, CHAID, Logistic regression	Ethnicity, Employment, Economic conditions, Social ties	U.K.	Early starters get involved in DTOs because of entertainment expenses, while late starters because of financial difficulties

[a]The sample reports the number of individuals included in the studies

Table 2 Details on the included qualitative studies

Source	Type of OCG	Data collection	Categories of factors	Geographic scope	Main findings
Albini (1971)	Mafias	Interviews informants Documents	Educational background Economic conditions Social ties Group identity Criminal background and skills Silence/*Omertà*	Italy	Recruitment of individuals into OCGs is also based on friendship, kinship, contract, and patron-client relationships
Arlacchi (1983)	Mafias	Interviews Investigative files Judicial records	Age Educational background Social ties Group identity Criminal background and skills	Italy	Individuals who get involved in mafias come from the middle-class, have an educational background and possess managerial skills
Arsovska (2015)	Other Criminal Organizations	Interviews Investigative files Judicial records	Age Ethnicity Economic conditions Social ties Group identity Criminal background and skills	Balkans	Individuals are recruited into OCGs based on ethnic ties, kinship ties, and display of violent behavior
Behan (1996)	Mafias	Interviews Investigative files	Age Economic conditions Social ties Criminal background and skills	Italy	Incarcerated individuals and especially youngsters attracted by the cult of violence can join the mafias
Brancaccio (2017)	Mafias	Investigative files Judicial records	Employment Economic conditions Social ties Criminal background and skills	Italy	Individuals enter the mafias because of kinship and blood ties, coupled with low economic conditions and violent/risk taking behavior
Brotherton and Barrios (2004)	Gangs	Interviews Documents	Economic conditions Group identity	U.S.	While females join gangs through blood ties, males rely on kinship and social relations developed in prison

Ciconte (1992)	Mafias	Judicial records Documents	Age Ethnicity Educational background Employment Economic conditions Social ties Criminal background and skills Silence/*Omertà*	Italy	Kinship and blood ties and the lack of legitimate occupations facilitate the involvement into the mafias
Cressey (1969)	Mafias	Interviews Investigative files Judicial records	Age Ethnicity Social ties Group identity Criminal background and skills Silence/*Omertà*	U.S.	Values like honor, loyalty, and silence are crucial for individuals aiming at joining the mafias
Decker and Chapman (2008)	DTOs	Interviews	Ethnicity Economic conditions Social ties Criminal background and skills	U.S. Latin America	Ethnic ties have a crucial role in DTOs membership
Densley (2012)	Gangs	Interviews	Group identity Criminal background and skills	U.K.	Individuals are recruited into gangs based on personal features like criminal competency and group loyalty
Gambetta (1993)	Mafias	Interviews Judicial records	Employment Social ties Group identity Criminal background and skills Silence/*Omertà*	Italy	Being able to enforce the code of silence and possessing relevant expertise are crucial factors for being recruited into the mafias
García (2006)	DTOs	Tapes and CDs	Group identity	Mexico	Individuals get involved in DTOs because of their need of power, belonging, respect, security, and pride
Gordon (2000)	Gangs	Interviews	Ethnicity Economic conditions Social ties	Canada	Individuals often access gangs through close friends due to ethnic marginality and the attraction of supportive peer groups

(continued)

Table 2 (continued)

Source	Type of OCG	Data collection	Categories of factors	Geographic scope	Main findings
Hess (1993)	Mafias	Judicial records Documents	Educational background Economic conditions Social ties Group identity Criminal background and skills Silence/Omertà	Italy	Individuals get involved in the mafias through social relations, especially because of their ability to connect the criminal members with other third parties, like other criminal groups or representative of legal businesses
Hixon (2010)	Gangs	Interviews	Gender Group identity Psychological factors	U.S.	Individuals recruited into OCGs usually have an history of negative and arrested development resulting in antisocial personality disorders
Lo (2010)	Mafias	Documents	Social ties Group identity Criminal background and skills Silence/Omertà	China	Being able to connect people from different environments favor recruitment into Chinese Triads
Lupo (1993)	Mafias	Judicial records Documents	Ethnicity Social ties Criminal background and skills Silence/Omertà	Italy	The mafias mainly recruit new members based on ethnicity and kinship and blood ties
Paoli (2003)	Mafias	Interviews Documents	Social ties Group identity Silence/Omertà	Italy	The contract of fraternization among recruited mafia members extends the bonds of loyalty and obligation beyond family ties, providing mutual support and trust
Sales (2015)	Mafias	Judicial records Documents	Educational background Employment Economic conditions Social ties Criminal background and skills	Italy	Individuals capable of strategic use of violence are recruited into the mafias
Sciarrone (2014)	Mafias	Judicial records	Social ties	Italy	The mafias mainly recruit new members based blood and kinship ties which are reinforced through an initiation ceremony with specific rituals

Sergi (2016)	Other Criminal Organizations	Investigative files Documents	Economic conditions Social ties Group identity Psychological factors	Italy	Being part of an OCG results from cultural transmission and gradual learning, therefore kinship and blood ties have a crucial role in the recruitment of new members
Van Koppen (2013)	Other Criminal Organizations	Investigative files	Employment Economic conditions Social ties	Netherlands	Individuals engage in OC activities exploiting their skills and kinship and blood ties, as criminals prefer to unfold their activities with family members or close friends
Van San and Sikkens (2017)	DTOs	Interviews Informants	Gender Economic conditions Social ties	Netherlands Peru	Female smugglers join DTOs mainly through their personal networks, i.e. family ties, romantic relationships, and friendships
Varese (2001)	Mafias	Interviews Investigative files Judicial records Documents	Social ties Criminal background and skills	Russia	Individuals getting involved in the mafias are recruited from a pool of trusted aspirants with no previous connections with law-enforcement agents
Varese (2006)	Mafias	Documents	Social ties	Italy	The mafias kin-based system of recruitment facilitates transplantation of criminal activities in a new region: when an entire blood family migrates the criminal group automatically reconstitutes itself
Varese (2011b)	Mafias	Interviews Judicial records Documents	Ethnicity Social ties Criminal background and skills	Italy Hungary U.S. China	When Russian mafia groups migrates, they recruit new local members based on their dependability and proven ability to use violence
Zhang and Chin (2002)	Other Criminal Organizations	Interviews	Ethnicity Group identity	U.S. China	Individuals enter Chinese Triads because of their commitment to making money and direct connections in the Chinese communities

**Table 3** Details on the included mixed-methods studies

Source	Type of OCG	Data collection	Categories of factors	Geographic scope	Main findings
Kleemans and de Poot (2008)	Other Criminal Organizations	Investigative files	Age Employment Social ties Criminal background and skills	Netherlands	Social relations in leisure and work settings may provide opportunities for joining OCGs throughout individuals' lives
Kleemans and Van de Bunt (2008)	Other Criminal Organizations	Investigative files	Employment Social ties	Netherlands	Social relations in leisure and work settings may provide opportunities for joining OCGs throughout individuals' lives
Morselli (2003)	Mafias	Investigative files Documents	Social ties Criminal background and skills	U.S.	Social relations and their management are crucial in the involvement and career in the mafias
Salinas, Requena and de la Corte (2011)	Other Criminal Organizations	Interviews Survey	Age Gender Employment Social ties Criminal background and skills	Spain	Individuals join OCGs because their employment could favor illegal activities or to have an additional income to their salary
Van Koppen et al. (2010b)	Other Criminal Organizations	Investigative files	Age Criminal background and skills	Netherlands	Most of individuals get involved in OCGs when they are adults
Van Koppen et al. (2010a)	Other Criminal Organizations	Investigative files	Criminal background and skills	Netherlands	Compared with general crime offenders, OC offenders more often have previous and serious judicial records
Varese (2011a)	Mafias	Investigative files	Gender Ethnicity Social ties	Italy	Women getting involved in the mafias have a more relevant role abroad than in their territory of origin
Varese (2013)	Mafias	Investigative files	Gender Ethnicity Social ties	Italy	Individuals getting involved in the mafias abroad mainly focus on economic investments and resource acquisition

Table 4 Categories of socio-economic and psychological factors associated with recruitment into OCGs and number of studies reporting on factor categories (n = 184)

Category of factors	Explanation of included factors	N. of factors
Age	Factors on the age at which individuals are likely to be recruited into OCGs (e.g. youngsters)	17
Gender	Factors on the differences between genders in being involved in OCGs (e.g. majority of OCGs members are males)	12
Ethnicity	Factors on the ethnic features of OCGs members (e.g. ethnic homogeneity)	13
Educational background	Factors on the level of education of individuals recruited by OCGs (e.g. illiteracy)	7
Employment	Factors on the how the lack of employment or the presence of specific work settings can be facilitators for joining OCGs (e.g. employees of logistic companies)	20
Economic conditions	Factors on how certain economic conditions can facilitate recruitment into OCGs (e.g. poverty)	19
Social ties	Factors on the relations that provide opportunities for being involved in OCGs (e.g. family ties)	38
Group identity	Factors on the values and subculture shared by OCGs members (e.g. honor)	18
Psychological factors	Factors on disorders related to the recruitment into OCGs (e.g. being antisocial)	6
Criminal background and skills	Factors on how previous criminal records, specific skills and attitudes can increase the opportunities to enter OCGs (e.g. risk-taking behaviors)	35
Silence/*Omertà*	Factors on the ability of enforcing the code of silence for being part of OCGs	9

Notwithstanding the differences among the included studies, each of them reported on the social, psychological, and/or economic factors associated with recruitment of individuals to OCGs. After carefully reading all the studies, the research team created categories of factors to organize the relevant information and systematize the knowledge on this field of study. The total number of factors identified across the 47 included studies is 184. The identification of factors in each study and their systematization into 11 categories allows analyzing how many times they are reported. The recurring factors are those related to social ties and criminal background and skills, which respectively appear 38 and 35 times throughout the included studies (Table 4).

Figure 2 highlights the different methodological approaches adopted by the studies reporting on each category of factors. As already underlined, the qualitative approach seems to fit better the study of the factors relating to recruitment into OCGs.
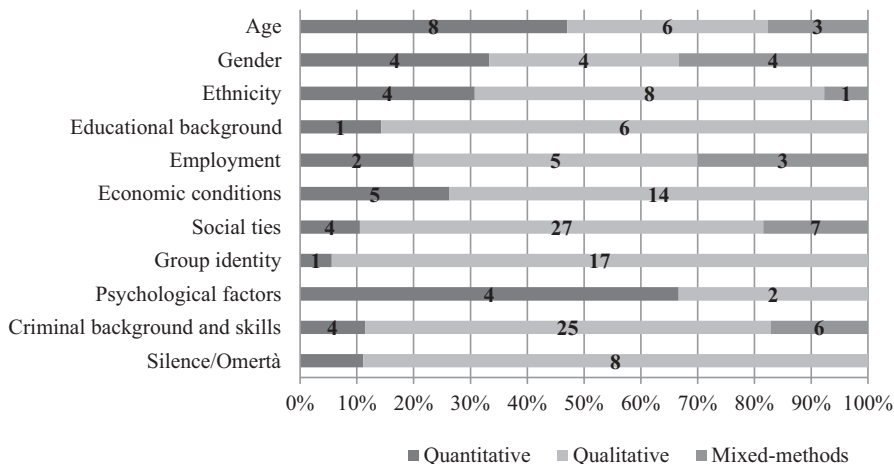
Source: authors' elaboration of the studies included in this systematic review.

Fig. 2 Factor categories per type of study (n = 184). (Source: authors' elaboration of the studies included in this systematic review.)

Social, Psychological, and Economic Factors Relating to Recruitment to Organized Crime Groups

Age

The reported age-groups of individuals involved into OC include both youngsters (Arlacchi 1983; Arsovska 2015; Behan 1996; Blokland et al. 2017; Carvalho and Soares 2016; Ciconte 1992; Cressey 1969; Hixon 2010; Kirby et al. 2016; Ostrosky et al. 2012) and adults (Blokland et al. 2017; Kissner and Pyrooz 2009; Kleemans and de Poot 2008; Salinas et al. 2011; Salinas and Regadera 2016; Unlu and Ekici 2012; Van Koppen et al. 2010b). Vulnerable young people join OCGs during adolescence and early adulthood. They are attracted by lifestyles dominated by the cult of violence and by the show off of material goods (Behan 1996; Hixon 2010; Ostrosky et al. 2012). The risk of recruitment at younger ages is also positively associated with problems at school, drug use, low socio-economic conditions, and the feeling of disillusion for the future (Arsovska 2015; Behan 1996; Carvalho and Soares 2016). As a result, OC offenders are significantly younger than general offenders in terms of age at first sanction (Kirby et al. 2016). The perspective of profits, instead, primarily attracts adults. Social connections and skills acquired with age facilitate their engagement in OC (Blokland et al. 2017; Kleemans and de Poot 2008). These two age-groups emerge across the different types of OGCs, with only few exceptions – outlaw motorcycle gangs specifically restrict membership to adults (Blokland et al. 2017).

Gender

The male population prevails across all the different types of OCGs (Brotherton and Barrios 2004; Hixon 2010; Kirby et al. 2016; Salinas et al. 2011; Unlu and Ekici 2012; Varese 2011a, 2013). The rate of OC male offenders is even higher compared with the population of general offenders (Salinas et al. 2011). The participation of women occurs at lower rates mainly through family or emotional ties, especially within DTOs (Brotherton and Barrios 2004; Requena et al. 2014; Salinas and Regadera 2016; Van San and Sikkens 2017; Varese 2011a). Their role varies across types of OCGs, and may change from home country to new territories.

Ethnicity

Criminological theories of strain, social disorganization, and subcultures developed over the last century examined ethnic differences in offending and crime patterns.[9] In line with these theories, ethnic marginality has been found to be associated with involvement in OC. OCG membership help individuals to overcome the marginalization of their ethnic minority status (Arsovska 2015; Gordon 2000). Marginalization can also help explaining the involvement in OC of illegal immigrants, whose irregular situation prevent them from finding a legitimate job (Salinas and Regadera 2016). Moreover, some ethnic groups are exposed to a higher risk of joining certain types of OCGs, e.g. black individuals in drug-trafficking gangs (Carvalho and Soares 2016).

Ethnic homogeneity proved to be relevant for most types of OCGs (Albini 1971; Ciconte 1992; Cressey 1969; Decker and Chapman 2008; Hess 1993; Lupo 1993; Varese 2011b, 2013; Wang 2013; Zhang and Chin 2002). Ethnic ties favor mutual trust relations, which play a major role in OCGs due to the illicit nature of the activities and the risk of detection and arrest for their members (Decker and Chapman 2008; Zhang and Chin 2002). Ethnic homogeneity not only has favoured the establishment of OCGs within their territory of origin (Arlacchi 1983; Behan 1996; Brancaccio 2017; Ciconte 1992; Gambetta 1993; Hess 1993), but has also contributed to their expansion across countries. With this regard, the literature reports on Italian mafias in the U.S. and Germany, Russian mafias in Italy, and maras (i.e. Central American street gangs) and Chinese triads in the U.S. (Albini 1971; Cressey 1969; Miguel Cruz 2010; Sciarrone and Storti 2014; Varese 2011a, 2013; Zhang and Chin 2002).

---

[9] Criminological theory states that ethnic heterogeneity coupled with low economic status, residential mobility, and family disruption lead to increases in crime rates among neighborhoods (Shaw and McKay 1972). Subcultural theories explain crime involvement among lower-class individuals belonging to ethnic minorities as a result of frustration and/or reaction to the dominant culture (Cloward and Ohlin 1960; Cohen 1955; Miller 1958).

Educational Background

Low education levels are positively associated with individuals' recruitment into OCGs (Albini 1971; Carvalho and Soares 2016; Ciconte 1992; Hess 1993; Sales 2015). In the case of mafias, illiteracy does not prevent members from having a long criminal career, becoming bosses and reaching wealth and status (Hess 1993). However, mafia members' educational levels may have increased over time (Arlacchi 1983). While in the past mafia members were mainly illiterate and lower class individuals, since the 1960s mafiosi include literate middle class individuals (Arlacchi 1983). Nevertheless, the growth in mafia members' education levels may simply reflect the general increased education in the overall population during the same period (Roser and Ortiz-Ospina 2017).

Employment

The lack of legitimate occupations and unemployment facilitates the involvement into OCGs (Brancaccio 2017; Ciconte 1992; Gambetta 1993; Jhi and Gerber 2015; Sales 2015; Wang 2013). A study has found the probability of becoming a gang member almost three times lower for individuals with employment experience than for those who have always been unemployed (Jhi and Gerber 2015). However, some strategic occupations may also offer opportunities for criminal behaviour (Ciconte 1992; Kleemans and de Poot 2008; Kleemans and Van de Bunt 2008; Salinas et al. 2011; Van Koppen 2013). These occupations share some characteristics, as a certain degree of independence to employees, the social exchange, and the relation with mobility and logistics. Workers of the transport industry, especially truck drivers, owners of car companies, and car dealers are attractive for OCGs (Kleemans and de Poot 2008; Kleemans and Van de Bunt 2008; Van Koppen 2013). In these cases, licit employments can conceal illicit activities, and illicit activities in turn can complement the legal salaries (Salinas et al. 2011).

Economic Conditions

Growing in poor city suburbs and socio-economically deprived environments facilitates recruitment into OCGs (Brotherton and Barrios 2004; Carvalho and Soares 2016; Ciconte 1992; Decker and Chapman 2008; Gordon 2000; Jhi and Gerber 2015; Sergi 2016; Van San and Sikkens 2017). Individuals from low socio-economic status may drop out of school to contribute to the family expenses and to improve their living conditions. In such contexts, criminal activities may be attractive as a way to pursue material and emotional reward (Gordon 2000; Ostrosky et al. 2012). A career into Italian mafias, for example, fascinate many youngsters living in suburbs characterised by lack of money, goods, or means of support, contributing to their continuous recruitment (Albini 1971; Arsovska 2015; Behan 1996; Brancaccio 2017; Hess 1993; Sales 2015). Nevertheless, individuals from higher socio-

economic conditions can also join OCGs, mainly attracted by high monetary gain (Gordon 2000; Unlu and Ekici 2012; Van Koppen 2013; Wang 2013). This could be a factor facilitating recruitment of individuals facing debts, specific needs (e.g. drug addiction), or difficult life events (e.g. sudden illness) (Van Koppen 2013).

Social Ties

Social relations facilitate the involvement into criminal activities among the different types of OCGs (McIllwain 1999). Social relations may be developed in disparate spheres of everyday life (e.g. leisure and work ties), and later become a bridge to OC (Decker and Chapman 2008; Gambetta 1993; Gordon 2000; Kleemans and de Poot 2008; Kleemans and Van de Bunt 2008; Morselli 2003; Paoli 2003; Sales 2015; Van Koppen 2013; Van San and Sikkens 2017; Varese 2001, 2011b, 2013; Wang 2013). This mechanism has been defined as "social opportunity structure" (Kleemans and de Poot 2008). Individuals may join criminal settings because of their experience and expert knowledge, and/or their ability to connect criminal members with third parties, other criminal groups or representatives of the legal businesses (Morselli 2003; Varese 2011a). Work, social, and criminal ties are therefore interwoven. Leisure activities and sidelines often act as a bridge between representatives of the legal and criminal settings (Kleemans and de Poot 2008; Kleemans and Van de Bunt 2008; Van Koppen 2013). The social opportunity structure may explain why some individuals get involved into OCGs during adulthood: their relational network enables their expertise to match a specific criminal opportunity. Moreover, individuals' attitude towards criminal opportunities may loosen due to improvise life events (e.g., bankruptcy) (Kleemans and de Poot 2008; Van Koppen 2013).

Kinship and blood ties are facilitators to access OCGs (Arlacchi 1983; Arsovska 2015; Behan 1996; Brancaccio 2017; Ciconte 1992; Cressey 1969; Decker and Chapman 2008; Gambetta 1993; Kissner and Pyrooz 2009; Lo 2010; Requena et al. 2014; Salinas et al. 2011; Salinas and Regadera 2016; Sciarrone 2014; Sergi 2016; Van Koppen 2013; Varese 2001, 2006, 2011a). The key role of kinship and blood ties in the recruitment into OCGs results from the need of cultural transmission and gradual learning of criminal culture and knowledge to new members (Gordon 2000; Sergi 2016). Family members and close friends are easier to trust in the criminal environment lacking third parties to regulate businesses and disputes (Van Koppen 2013). Being part of a criminal family may per se facilitate one's recruitment into OCGs, especially in the mafias (Albini 1971; Arlacchi 1983; Ciconte 1992; Gambetta 1993; Hess 1993; Lupo 1993; Paoli 2003; Sciarrone 2014; Sergi 2016). In the mafias, the concept of family goes beyond proper kinship and blood ties. Individuals can assume a permanent new identity as "men of honor" in OCGs through the acceptance of a "status contract", through their affiliation ceremony (which in some Italian mafias is called "baptism"). During this ceremony, several rituals help creating brotherhood ties among members, thus also enabling "contract of fraternization". This contract extends the family bonds of loyalty and obligation,

providing members with the mutual support and trust necessary to pursue groups' aims (Paoli 2003). Family ties play a significant role also for gangs, in which parental gang membership has been proven to be a significant predictor of individuals' affiliation (Kissner and Pyrooz 2009).

Group Identity

The sense of belonging and social identity associated with the membership into a criminal group facilitates the recruitment into OCGs (Arsovska 2015; Brotherton and Barrios 2004; Densley 2012; García 2006; Hixon 2010; May 2009). Co-offending and social interactions within the OCGs reinforce the sense of loyalty and social cohesion among members (Densley 2012). These processes enhance members' sense of group identity (García 2006). Moreover, individuals joining OCGs in many cases belong to subcultures characterized by values of honor and loyalty, and are often recruited through ritualized procedures of affiliation (Albini 1971; Arlacchi 1983; Brotherton and Barrios 2004; Cressey 1969; Gambetta 1993; Hess 1993; Hixon 2010; Lo 2010; Paoli 2003; Sciarrone 2014; Sergi 2016; Zhang and Chin 2002). This is particularly relevant in the case of mafias, in which the initiation ceremonies play a key role (Albini 1971; Gambetta 1993; Hess 1993; Hixon 2010; Paoli 2003; Sergi 2016). To be recruited into the mafias, individuals must have psychic attitudes and a moral code typical of "men of honor", who are respected and capable of violent revenge if necessary (Gambetta 1993; Hess 1993). During the initiation ceremonies, the new members have to take an oath of "providing for the family of a member in the event of his death or incarceration" (Albini 1971, pp. 113–114; see also Paoli 2003; Sergi 2016).

Psychological Factors

Some studies associate substance use disorder, childhood conduct disorder, and/or abnormal psychopathological traits to an increase of individuals' risk of involvement in OC activities (Hixon 2010; Kissner and Pyrooz 2009; May 2009; Ostrosky et al. 2012; Schimmenti et al. 2014; Sergi 2016). Individuals recruited into OCGs usually have an extensive history of negative and arrested development during adolescence, leading to antisocial personality disorders during their adulthood (Hixon 2010).

A medium–high psychopathy level is common among most OC members, in line with their criminal skills. OC offenders lack empathy and inhibition, they have marked cruelty and callousness, affective impairments, and an average antisocial lifestyle. Such profiles are compatible with violent and risky activities, and committing physical assaults for immediate gratification, regardless of potential prosecution (Ostrosky et al. 2012). Another study confirmed the psychopathy and antisocial traits characterizing mafias' members, also underlying their infantile and dependent personality traits, demonstrated by their obedience to the willingness of their orga-

nizations. Mafia members differ from other offenders in that they do not suffer from substance use disorder. Substance use may indeed impair the reliability of mafia members, who always have to display the honorable principles of their organizations (Schimmenti et al. 2014).

Nevertheless, criminals involved in "high-profile" activities, like money-laundering, present different characteristics. These individuals maintain quite a normal lifestyle, but they lack affective bonds, they have increased arrogance, callousness, and a strong desire for recognition and for a certain economic status. These features allow them to achieve their goals through unethical and illicit non-violent activities (Ostrosky et al. 2012).

Criminal Background and Skills

Attitudes towards violent and risk-taking behaviors are essential to be part of OCGs. Violence is key to reinforce the criminal status of members, obtaining the respect and social acceptance of their group (Albini 1971; Behan 1996). Consequently, people with a criminal background are more likely to become involved in OCGs (Albini 1971; Arlacchi 1983; Behan 1996; Blokland et al. 2017; Brancaccio 2017; Gambetta 1993; Hess 1993; Kirby et al. 2016; Requena et al. 2014). In many cases OC members have a long criminal history (Albini 1971; Arsovska 2015; Blokland et al. 2017; Brancaccio 2017; Cressey 1969; Decker and Chapman 2008; Densley 2012; Gambetta 1993; Kirby et al. 2016; Kleemans and de Poot 2008; Lupo 1993; Morselli 2003; Sales 2015; Salinas et al. 2011; Van Koppen et al. 2010a, b; Varese 2011b). Compared to the population of general offenders, OC offenders show higher rates of offending seriousness, and serve longer time in prison (Van Koppen et al. 2010a). The key role of the cult of violence also explains the positive association between prison background and recruitment into OCGs, as individuals seek for protection and personal safety within the penitentiary (Behan 1996; Ciconte 1992).

The possession of criminal skills or special expertise is another relevant feature for recruitment into OCGs. The former refers to the ability of avoiding police detection and allows OCGs to test the loyalty and criminal potential of individuals (Densley 2012). The latter refers to high levels of knowledge, or the right set of skills, making individuals suited for certain types of illegal businesses. In some cases, the special expertise required can be very specific, as for translators, people capable of handling explosives, or people with a chemistry background supporting drug-related operations (Gambetta 1993). Such special expertise can derive from criminal or legitimate experience (Van Koppen 2013; Salinas and Regadera 2016). In both cases, having a special expertise explains the involvement in OCGs during adulthood (Kleemans and de Poot 2008). Individuals with specific criminal expertise acquired through their criminal career may be recruited in prison (Behan 1996; Ciconte 1992) or outside (Arlacchi 1983; Cressey 1969; Gambetta 1993; Lo 2010; Salinas et al. 2011; Salinas and Regadera 2016; Sergi 2016; Van Koppen 2013).

Silence/Omertà

Individuals joining OCGs cannot break the code of silence, also known as omertà, required to commit OC activities (Albini 1971; Ciconte 1992; Cressey 1969; Gambetta 1993; Hess 1993; Lo 2010; Lupo 1993; Paoli 2003; Requena et al. 2014). For mafia members, handling secrecy also implies the impossibility to have contacts or any relationships with legal authorities. Albini (1971, pp. 107–108) underlines that "omertà is not unique to any one organization or society. Omertà is a behavior and attitude [and] […] it represents suspicion and resentment of government and law".

Discussion

This systematic review includes 47 studies published over a span of nearly fifty years (1969–2017). Results show that the majority of the studies employs qualitative methods and cover the entire period, though quantitative research has recently increased. Compared to the previous decade (i.e. 2000–2009), literature on recruitment into OCGs has risen by almost 108%, with 27 included studies published since 2010. The growth has encompassed all type of studies, but the most notable increase has involved the use of quantitative methods (from 2 studies during 2000–2009 to 10 since 2010).

As for the geographic scope, the recent rising trend has mostly occurred in Europe. Of the total number of included studies, almost 40% (n = 18) investigate recruitment into OCGs in the European context and were published on or after 2010. Italy is the most represented country, though academic studies on the Netherlands and Spain have also emerged over the last two decades. After Europe, the most represented continent is North America, followed by a small number of comparative research studies (e.g. OC in the U.S. and China).

Results therefore show that literature focuses on Europe rather than the Americas, Russia, and Far East, other geographic areas also affected by the presence of OCGs. This finding suggests that the interest in OC-related activities is prevalent in some countries, while in others there seems to be less attention despite a long tradition in criminological research (e.g. the U.S.). Nonetheless, the advancement of quantitative research in the study of OC may change this scenario, fostering the interest of more scholars. Further quantitative studies in under-represented countries would contribute to enhance the knowledge on risk factors for involvement into OCGs.

Research findings show that factors associated with recruitment into OCGs are highly interrelated. Social and economic factors play a major role while psychological factors are found to be less important. This finding is in line with the literature on the social opportunity structure (Kleemans and De Poot 2008) as the underlying mechanism through which recruitment into OCGs occurs. Opportunities to enter OCGs depend on individuals' personal background and skills, as well as on the social relations they develop in different settings of their lives. Previous studies indeed consistently highlight

the importance of factors as violent attitudes and behavior, criminal background, low economic status, and social relations in facilitating individuals' involvement into OC. Members of OCGs usually have a significant criminal history and/or a prison background resulting from their proneness to violent and risk-taking behavior. This is particularly true for people living in poor and socially disorganized areas. The lack of access to legitimate means to attain commonly accepted goals may make them more prone to seek illegal alternatives to overcome difficulties. In this perspective emerges the social embeddedness of OC. Recruitment in OCGs mainly revolves on social proximity and interaction with members of criminal organizations. Although relations developed in work settings and everyday activities are important in recruiting new members, kinship and blood ties with OC offenders allow for increased mutual trust and loyalty.

Though social, psychological, and economic factors are highly interrelated concerning criminal recruitment, some are equally present across various types of OCGs, while others are particularly relevant for some of them. Kinship and blood ties are particularly important in recruiting mafia members. Furthermore, these groups succeed in extending the family concept beyond proper kinship and blood ties. Through the initiation ritual, individuals accept the "contract of fraternization" enhancing brotherhood ties among members, and increasing the cohesion of the criminal organizations and reinforces group identity. This latter aspect is a key factor also for gang membership. Rituals and a common culture provide individuals with a sense of belonging that favors their involvement in gangs. Conversely, individuals usually join DTOs mainly driven by monetary returns. Finally, individuals get involved in other criminal organizations during adulthood as they develop specialized expertise and social ties with criminals only later in life.

The identification of a broad variety of factors on recruitment into OCGs benefits from studies adopting different methodological approaches. Included studies are consistent in pointing to the same factors, regardless of their quantitative, qualitative, or mixed-methods approach. Nonetheless, each approach better suits the analysis of specific factors. For instance, while quantitative studies usually report on age, gender, and economic conditions, qualitative research often deals with factors that can hardly be quantified, as group identity and silence/omertà (Fig. 2). Relevant grey literature further corroborates the consistency of the results. Selected reports identify the same factors emerging from the review on empirical studies on the Italian mafias operating in their territory of origin, as well as on foreign mafias operating in other geographic areas. However, the inclusion of studies adopting different methodological approaches (Fig. 1), as well as the heterogeneity of the concept of OC, may limit the generalizability of research results beyond the OCG and the geographic area under analysis in each study. On the one hand, the main limitations of included qualitative studies relate to their research designs. Many of them rely on case studies, thus lacking external validity. Alternatively, they are monographies focusing on the mafias in their territories of origin. On the other hand, the main limitation of quantitative and mixed-methods studies lies in their data sources. They mostly rely on investigative and judicial data, thus referring to non-random samples that suffer from the "dark number" issue (i.e. the discrepancy between the number of real events and the reported offences and offenders). Notwithstanding the methodological approach, the limited generalizabil-

ity of the results may be due to the heterogeneity of the concept of OC. Given the lack of a unique definition of OC, the literature in this field of study encompasses varying regions and criminal organizations. The adoption of a broad definition of OC (i.e. by identifying four types of OCGs) allows providing a general overview of the factors relating to recruitment into OC, although results should be interpreted with caution when considering other types of OCGs. Nonetheless, the results of this systematic review provide a systematized and comprehensive understanding on the factors facilitating pathways into OC, while also pointing out relatively under-examined factors for future studies. Finally, research findings contribute to consolidate the knowledge in this field and may serve to inform the policy-making process aimed at preventing involvement into OC.

Conclusions

This study is the first systematic review shedding light on the most commonly reported social, psychological, and economic factors associated with involvement into OC. The extensive and rigorous search – performed in multiple languages and several databases – has allowed identifying and assessing potentially eligible records while also reducing the risk of bias in the inclusion of relevant literature.

The systematic review includes 47 studies, of which the majority are qualitative (57%), followed by quantitative studies (26%) and mixed-methods ones (17%). The literature includes different types of OCGs – among all Italian mafias (40% of the studies) and other criminal organizations (30%) – with official statistics, investigative and judicial files as the main source of data.

Research findings highlight that social and economic factors play a major role for involvement into OC. Individuals' recruitment into OCGs is influenced, among all, by low socio-economic status, attraction for a strong group identity, and social ties. Social connections and work-related ties drive the recruitment of late-onset offenders, who get involved into OC because of criminal opportunities, which may arise at later stages in life. Financial gains are also found to be important, especially for individuals who join DTOs. An existing criminal background or possession special expertise constitute a positive driver for involvement into OC, although some OCGs as the mafias require peculiar skills as the ability of handling secrecy and enforce the code of silence.

As for limitations, the research design adopted by qualitative and mixed-methods approaches might mitigate generalizability of findings to other OCGs or other geographic areas. Nonetheless, this study provides a more comprehensive understanding on factors associated with involvement in OC and contributes to the consolidation of such knowledge also providing insights on the empirical evidence by geographic areas and types of literature included (i.e. types of methods and data sources). In addition, the heterogeneity of the concept of OC has made it difficult to perform a meta-analysis to properly combine and analyze the results from multiple quantitative studies. Despite these limitations, this systematic review is the first study to synthesize the empirical evidence on factors related to recruitment into OCGs.

Future studies may expand and improve this review under some aspects. One of the main implications for future research regards the methodological approach in the study of recruitment into OC. If the recently emerged quantitative approach proliferates, results of future studies will have an increased external validity. Quantitative research will also allow the development and testing of hypotheses and therefore the empirical test of theoretical contributions in the field of OC. In addition, further quantitative research will allow further enhancing the empirical evidence on risk factors for involvement into OC and comparing such dynamics with general or less serious crimes. These improvements could be feasible provided the exchange of data and information among law enforcement agencies, scholars, and policy-makers. Increasing publication of quantitative studies would also facilitate the comparison of results across different types of OCGs and regions. Future studies may adopt different scopes, focusing on different types of OCGs or on OCGs active in specific geographic areas that are currently underrepresented (e.g. Asian or African countries). Overall, scholars should focus on factors relating to recruitment into OCGs with more detail and more comprehensively. They may therefore focus on both those factors emerging as crucial (e.g. individuals' criminal background and social relations) and others that are currently underreported (e.g. psychological factors as personality traits).

These improvements would positively influence future OC research as well as practitioners and policy-makers' work. Extensive and systematic knowledge of the factors relating to recruitment into OCGs would allow institutions to tackle this continuous process. The analysis identification of individual red flags combined with the assessment of risky social environments would facilitate the design of tailored policies aimed at preventing recruitment into OCGs. The limited generalizability of the research findings prevents the identification of specific recommendations for crime prevention policies. Nonetheless, the results of this systematic review can inform future policy-making processes enhanced by further empirical research on OC and involvement into OCGs.

References

Studies Included in the Systematic Review

Albini, J. L. (1971). *The American mafia: Genesis of a legend*. New York: Appleton-Century-Crofts.
Arlacchi, P. (1983). *La mafia imprenditrice*. Bologna: Il Mulino.
Arsovska, J. (2015). *Decoding Albanian organized crime: Culture, politics, and globalization*. Oakland: University of California Press.
Behan, T. (1996). *The camorra*. London: Routledge.
Blokland, A., van Hout, L., van der Leest, W., & Soudijn, M. (2017). Not your average biker; criminal careers of members of Dutch outlaw motorcycle gangs. *Trends in Organized Crime., 22*, 10–33. https://doi.org/10.1007/s12117-017-9303-x.
Brancaccio, L. (2017). *I clan di camorra: genesi e storia*. Roma: Donzelli Editore.

Brotherton, D., & Barrios, L. (2004). *The almighty Latin King and Queen Nation: Street politics and the transformation of a New York City gang*. New York/Chichester: Columbia University Press.

Carvalho, L. S., & Soares, R. R. (2016). Living on the edge: Youth entry, career and exit in drug-selling gangs. *Journal of Economic Behavior & Organization, 121*, 77–98. https://doi.org/10.1016/j.jebo.2015.10.018.

Ciconte, E. (1992). *"Ndrangheta dall"unità a oggi*. Bari: Editori Laterza.

Cloward, R., & Ohlin, L. (1960). *Delinquency and Opportunity*. New York: The Free Press.

Cressey, D. R. (1969). *Theft of the nation: The structure and operations of organized crime in America*. New Brunswick/London: Transaction Publishers.

Cohen, A. K. (1955). *Delinquent Boys: The Culture of the Gang*. Glencoe, IL: Free Press.

Decker, S. H., & Chapman, M. T. (2008). Roles, recruitment into, and remaining involved in the drug smuggling trade. In *Drug smugglers on drug smuggling: Lessons from the inside* (pp. 88–113). Philadelphia: Temple University Press.

Densley, J. A. (2012). Street gang recruitment: Signaling, screening, and selection. *Social Problems, 59*(3), 301–321. https://doi.org/10.1525/sp.2012.59.3.301.

Gambetta, D. (1993). *The Sicilian mafia: The business of private protection*. Cambridge, MA: Harvard University Press.

García, M. M. (2006). "Narcoballads": The psychology and recruitment process of the "Narco.". *Global Crime, 7*(2), 200–213. https://doi.org/10.1080/17440570601014461.

Gordon, R. M. (2000). Criminal business organizations, street gangs and wanna-be groups: A Vancouver perspective. *Canadian Journal of Criminology, 42*, 39–60.

Hess, H. (1993). *Mafia: Le origini e la struttura*. Roma-Bari: Editori Laterza.

Hixon, S. J. (2010). *Archetypal perspectives on Nordic and Germanic initiation symbols, mythology, and rites of passage in a European American self-referenced White supremacist gang* (PhD dissertation, Saybrook University). Ann Arbor: ProQuest/UMI (Publication No. 3418929).

Jhi, K. Y., & Gerber, J. (2015). Texan gangs in "Da Hood:" The impact of actual and perceptual neighborhood qualities on gang membership. *Justice Policy Journal, 12*, 1–25.

Kirby, S., Francis, B., Humphreys, L., & Soothill, K. (2016). Using the UK general offender database as a means to measure and analyse organized crime. *Policing: An International Journal, 39*(1), 78–94. https://doi.org/10.1108/PIJPSM-03-2015-0024.

Kissner, J., & Pyrooz, D. C. (2009). Self-control, differential association, and gang membership: A theoretical and empirical extension of the literature. *Journal of Criminal Justice, 37*(5), 478–487. https://doi.org/10.1016/j.jcrimjus.2009.07.008.

Kleemans, E. R., & de Poot, C. J. (2008). Criminal careers in organized crime and social opportunity structure. *European Journal of Criminology, 5*(1), 69–98. https://doi.org/10.1177/1477370807084225.

Kleemans, E. R., & Van de Bunt, H. G. (2008). Organised crime, occupations and opportunity. *Global Crime, 9*(3), 185–197. https://doi.org/10.1080/17440570802254254.

Lo, W. T. (2010). Beyond social capital: Triad organized crime in Hong Kong and China. *British Journal of Criminology, 50*(5), 851–872. https://doi.org/10.1093/bjc/azq022.

Lupo, S. (1993). *Storia della mafia*. Roma: Donzelli Editore.

May, C. (2009). *The relationship between risk factors, social support and gangs* (PhD dissertation, Alliant International University). Ann Arbor: ProQuest/UMI (Publication No. 3421105).

McIllwain, J. S. (1999). Organized crime: A social network approach. *Crime, Law and Social Change, 32*(4), 301–323. https://doi.org/10.1023/A:1008354713842.

Miguel Cruz, J. (2010). Central American maras: From youth street gangs to transnational protection rackets. *Global Crime, 11*(4), 379–398. https://doi.org/10.1080/17440572.2010.519518.

Miller, W. B. (1958). Lower Class Culture as a Generating Milieu of Gang Delinquency. *Journal of Social Issues, 14*(3), 5–19. https://doi.org/10.1111/j.1540-4560.1958.tb01413.x.

Morselli, C. (2003). Career opportunities and network-based privileges in the Cosa Nostra. *Crime, Law and Social Change, 39*(4), 383–418. https://doi.org/10.1023/A:1024020609694.

Ostrosky, F., Borja, K. C., Rebollar, C. R., & Díaz, K. X. (2012). Neuropsychological profiles of members of organized crime and drug-traffic organizations. *Research and Reports in Forensic Medical Science*, 19–30. https://doi.org/10.2147/RRFMS.S32352.

Paoli, L. (2003). *Mafia brotherhoods: Organized crime, Italian style*. Oxford: Oxford University Press.

Requena, L., de Juan, M., Salinas, A. G., & de la Corte, L. (2014). A psychosocial study on crime and gender: Position, role and status of women in a sample of Spanish criminal organizations / Un estudio psicosocial sobre la delincuencia y género. Posición, rol y estatus de la mujer en una muestra española de organizaciones criminales. *Revista de Psicología Social, 29*(1), 121–149. https://doi.org/10.1080/02134748.2013.878572.

Roser, M., & Ortiz-Ospina, E. (2017). *Global Education*. Published online at OurWorldInData. org. Retrieved from: https://ourworldindata.org/global-rise-of-education [Online Resource]

Sales, I. (2015). *Storia dell'Italia mafiosa: perché le mafie hanno avuto successo*. Soveria Mannelli: Rubbettino.

Salinas, A. G., & Regadera, S. F. (2016). Multiple affiliations in criminal organizations: Analysis of a Spanish sample. *Crime, Law and Social Change, 65*(1–2), 47–65. https://doi.org/10.1007/s10611-015-9597-z.

Salinas, A. G., Requena, L., & De la Corte, L. (2011). ¿Existe un perfil de delincuente organizado? Exploración a partir de una muestra española. *Revista Electrónica de Ciencia Penal Y Criminología, 13*(3), 03:1–03:32.

Schimmenti, A., Caprì, C., La Barbera, D., & Caretti, V. (2014). Mafia and psychopathy. *Criminal Behaviour and Mental Health, 24*(5), 321–331. https://doi.org/10.1002/cbm.1902.

Sciarrone, R. (2014). `Ndrangheta: A reticular organization. In N. Serenata (Ed.), *The `Ndrangheta and Sacra Corona Unita* (Vol. 12, pp. 81–99). Cham: Springer. https://doi.org/10.1007/978-3-319-04930-4_6.

Sciarrone, R., & Storti, L. (2014). The territorial expansion of mafia-type organized crime. The case of the Italian mafia in Germany. *Crime, Law and Social Change, 61*(1), 37–60. https://doi.org/10.1007/s10611-013-9473-7.

Sergi, A. (2016). A qualitative reading of the ecological (dis)organisation of criminal associations. The case of the "Famiglia Basilischi" in Italy. *Trends in Organized Crime, 19*(2), 149–174. https://doi.org/10.1007/s12117-015-9254-z.

Shaw, C. R., & McKay, H. D. (1972). *Juvenile delinquency and urban areas*. Chicago: University of Chicago Press.

Unlu, A., & Ekici, B. (2012). The extent to which demographic characteristics determine international drug couriers' profiles: A cross-sectional study in Istanbul. *Trends in Organized Crime, 15*(4), 296–312. https://doi.org/10.1007/s12117-012-9152-6.

Van Koppen, M. V. (2013). Involvement mechanisms for organized crime. *Crime, Law and Social Change, 59*(1), 1–20. https://doi.org/10.1007/s10611-012-9396-8.

Van Koppen, M. V., de Poot, C. J., & Blokland, A. A. J. (2010a). Comparing criminal careers of organized crime offenders and general offenders. *European Journal of Criminology, 7*(5), 356–374. https://doi.org/10.1177/1477370810373730.

Van Koppen, M. V., de Poot, C. J., Kleemans, E. R., & Nieuwbeerta, P. (2010b). Criminal trajectories in organized crime. *British Journal of Criminology, 50*(1), 102–123. https://doi.org/10.1093/bjc/azp067.

Van San, M., & Sikkens, E. (2017). Families, lovers, and friends: Women, social networks, and transnational cocaine smuggling from Curaçao and Peru. *The Howard Journal of Crime and Justice, 56*(3), 343–357. https://doi.org/10.1111/hojo.12218.

Varese, F. (2001). *The Russian mafia: Private protection in a new market economy*. Oxford/New York: OUP Oxford.

Varese, F. (2006). How mafias migrate: The case of the `Ndrangheta in northern Italy. *Law & Society Review, 40*(2), 411–444. https://doi.org/10.1111/j.1540-5893.2006.00260.x.

Varese, F. (2011a). How mafias take advantage of globalization: The Russian mafia in Italy. *British Journal of Criminology, 52*(2), 235–253. https://doi.org/10.1093/bjc/azr077.

Varese, F. (2011b). *Mafias on the move: How organized crime conquers new territories*. Princeton: Princeton University Press.

Varese, F. (2013). The structure and the content of criminal connections: The Russian mafia in Italy. *European Sociological Review, 29*(5), 899–909. https://doi.org/10.1093/esr/jcs067.

Wang, W. (2013). *Conventional capital, criminal capital, and criminal careers in drug trafficking* (PhD dissertation, Arts and Social Sciences: School of Criminology). Burnaby, B.C.: Simon Fraser University Library.

Zhang, S., & Chin, K.-L. (2002). Enter the dragon: Inside Chinese human smuggling organizations. *Criminology, 40*(4), 737–768. https://doi.org/10.1111/j.1745-9125.2002.tb00972.x.

Other References

Albini, J. L. (1971). *The American mafia: Genesis of a legend*. New York: Appleton-Century-Crofts.

Albrecht, H.-J., & Fijnaut, C. (Eds.). (2002). *The containment of transnational organized crime: comments on the UN convention of December 2000*. Freiburg im Breisgau: Ed. iuscrim Max-Planck-Inst. für Ausländisches und Internat. Strafrecht.

Bandiera, O. (2003). Land reform, the market for protection, and the origins of the Sicilian mafia: Theory and evidence. *Journal of Law, Economics, and Organization, 19*(1), 218–244. https://doi.org/10.1093/jleo/19.1.218.

Benzies, K. M., Premji, S., Hayden, K. A., & Serrett, K. (2006). State-of-the-evidence reviews: Advantages and challenges of including grey literature. *Worldviews on Evidence-Based Nursing, 3*(2), 55–61. https://doi.org/10.1111/j.1741-6787.2006.00051.x.

Blevins, K. R., Johnson Listwan, S., Cullen, F. T., & Lero Jonson, C. (2010). A general strain theory of prison violence and misconduct: An integrated model of inmate behavior. *Journal of Contemporary Criminal Justice, 26*(2), 148–166. https://doi.org/10.1177/1043986209359369.

Carvalho, L. S., & Soares, R. R. (2016). Living on the edge: Youth entry, career and exit in drug-selling gangs. *Journal of Economic Behavior & Organization, 121*, 77–98. https://doi.org/10.1016/j.jebo.2015.10.018.

Clapper, J. R. (2015). *Statement for the record worldwide threat assessment of the U.S. IC before the Senate Armed Services Committee*. Washington: Office of the Director of National Intelligence. Retrieved from https://www.dni.gov/files/documents/Unclassified_2015_ATA_SFR_-_SASC_FINAL.pdf.

Cornish, D. B., & Clarke, R. V. (2002). Analyzing organized crime. In A. R. Piquero & S. G. Tibbetts (Eds.), *Rational choice and criminal behavior: Recent research and future challenges*. New York: Garland.

Cressey, D. R. (1969). *Theft of the nation: The structure and operations of organized crime in America*. Transaction Publishers.

Critical Appraisal Skills Programme. (2017). *CASP qualitative checklist*. [online] Available at: http://www.casp-uk.net/checklists Accessed: 11/10/2017.

Daniele, V. (2009). Organized crime and regional development. A review of the Italian case. *Trends in Organized Crime, 12*(3–4), 211–234. https://doi.org/10.1007/s12117-009-9079-8.

Decker, S. H., & Pyrooz, D. C. (2014). Gangs another form of organized crime? In L. Paoli (Ed.), *Oxford handbook of organized crime*. Oxford: Oxford University Press.

Dixon-Woods, M., Bonas, S., Booth, A., Jones, D. R., Miller, T., Sutton, A. J., et al. (2006). How can systematic reviews incorporate qualitative research? A critical perspective. *Qualitative Research, 6*(1), 27–44. https://doi.org/10.1177/1468794106058867.

Finckenauer, J. O. (2007). *Mafia and organized crime: A beginner's guide*. Oxford: Oneworld Publications.

Fisher, H., Montgomery, P., & Gardner, F. (2008a). Cognitive-behavioural interventions for preventing youth gang involvement for children and young people. *Campbell Systematic Reviews, 7*, 1–35. https://doi.org/10.4073/csr.2008.7.

Fisher, H., Montgomery, P., & Gardner, F. (2008b). Opportunities provision for preventing youth gang involvement for Children and Young People (7-16). *Campbell Systematic Reviews, 8*, 1–32. https://doi.org/10.4073/csr.2008.8.

Gambetta, D. (1993). *The Sicilian mafia: The business of private protection*. Harvard University Press.

Hagan, F. E. (2015). *Introduction to criminology: Theories, methods, and criminal behavior*. Los Angeles: SAGE Publications.

Hess, H. (1993). *Mafia: Le origini e la struttura*. Editori Laterza: Roma-Bari.

Higginson, A., Mazerolle, L., Benier, K. H., & Bedford, L. (2014). Predictors of youth gang membership in low-and middle-income countries: A systematic review. *Campbell Systematic Reviews*. Retrieved from https://campbellcollaboration.org/library/predictors-of-youth-gang-membership-low-and-middle-income-countries.html

Hodgkinson, J., Marshall, S., Berry, G., Newman, M., Reynolds, P., Burton, E., et al. (2009). Reducing gang related crime: A systematic review of 'comprehensive' interventions. Technical report. In *Research evidence in education library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Ianni, F. A. J. (1974). *Black mafia: Ethnic succession in organized crime* (1st ed.). New York: Simon & Schuster.

Jones, O. D., Wagner, A. D., Faigman, D. L., & Raichle, M. E. (2013). Neuroscientists in court. *Nature Reviews Neuroscience, 14*(10), 730–736. https://doi.org/10.1038/nrn3585.

Kleemans, E. R., & De Poot, C. J. (2008b). Criminal careers in organized crime and social opportunity structure. *European Journal of Criminology, 5*(1), 69–98. https://doi.org/10.1177/1477370807084225.

Kleemans, E. R., & Van de Bunt, H. G. (1999). The social embeddedness of organized crime. *Transnational Organized Crime, 5*(1), 19–36.

Kleemans, E. R., & Van de Bunt, H. G. (2008). Organised crime, occupations and opportunity. *Global Crime, 9*(3), 185–197. https://doi.org/10.1080/17440570802254254.

Kleemans, E. R., & Van Koppen, M. V. (2014). Careers in organized crime. In G. Bruinsma & D. Weisburd (Eds.), *Encyclopedia of criminology and criminal justice* (pp. 285–295). New York: Springer.

Klein, M. W., & Maxson, C. L. (2006). *Street gang patterns and policies*. New York: Oxford University Press.

Knox, J., & Gray, D. H. (2014). The national and international threat of drug trafficking organizations. *Global Security Studies, 5*(3), 27–34.

Langston, M. (2003). Addressing the need for a uniform definition of gang-involved crime. *FBI Law Enforcement Bulletin, 72*, 7.

Lavezzi, A. M. (2008). Economic structure and vulnerability to organised crime: Evidence from Sicily. *Global Crime, 9*(3), 198–220. https://doi.org/10.1080/17440570802254312.

Lavezzi, A. M. (2014). Organised crime and the economy: A framework for policy prescriptions. *Global Crime, 15*(1–2), 164–190. https://doi.org/10.1080/17440572.2013.868626.

Murray, J., Farrington, D. P., & Eisner, M. P. (2009). Drawing conclusions about causes from systematic reviews of risk factors: The Cambridge Quality Checklists. *Journal of Experimental Criminology, 5*(1), 1–23. https://doi.org/10.1007/s11292-008-9066-0.

Ostrosky, F., Borja, K. C., Rebollar, C. R., & Díaz, K. X. (2012). Neuropsychological profiles of members of organized crime and drug-traffic organizations. *Research and Reports in Forensic Medical Science*, 19–30. https://doi.org/10.2147/RRFMS.S32352.

Paoli, L. (2014a). Organized crime, types of. In G. Bruinsma & D. Weisburd (Eds.), *Encyclopedia of criminology and criminal justice* (pp. 3376–3387). New York: Springer.

Paoli, L. (2014b). The Italian mafia. In L. Paoli (Ed.), *The Oxford handbook of organized crime* (pp. 121–141). New York: Oxford University Press.

U.S. Department of Justice. (2010). *National drug threat assessment 2010* (National Drug Intelligence Center). Retrieved from https://www.justice.gov/archive/ndic/pubs38/38661/

United Nations. (2000). *Convention on transnational organized crime* (No. Assembly Resolution 55/95 of 15 Nov 2000). Retrieved from http://www.unodc.org/unodc/treaties/CTOC/

Varese, F. (2010). *Organized crime: Critical concepts in criminology*. London/New York: Routledge.

Walsh, A., & Beaver, K. M. (2009). Biosocial Criminology. In *Handbook on crime and deviance*. New York: Springer.

Wood, J. L., Alleyne, E., Mozova, K., & James, M. (2014). Predicting involvement in prison gang activity: Street gang membership, social and psychological factors. *Law and Human Behavior, 38*(3), 203–211. https://doi.org/10.1037/lhb0000053.