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# Determinants of Persistence in Collective Violence Offending

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## ABSTRACT

This study explores individual characteristics linked to an increased risk of persistence in collective violence. A sample of collective violence offenders ( $n = 438$ ) was identified based on individuals' involvement in a collective violence incident in 2011/2012 or due to them being recorded in a police database of 'known' football hooligans. For the current analyses, persistence was defined as recidivism to collective violence assessed over a 4- to 5-year time span. Criminal career data were obtained from the police (register data). Individual characteristics concerned criminal career measures, behavioral indicators of personality traits and childhood problematic behavior. Due to a lack of other available data sources, behavioral indicator data were largely obtained from police and probation service information. The results of this study indicate that offender characteristics can be linked to persistence in collective violence. Results contrast currently dominant theoretical perspectives on the etiology of collective violence. Theoretical and practical implications are discussed.

## ARTICLE HISTORY

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## Introduction

Mass public disturbances are characterized by the involvement of large numbers of people acting violently against other individuals and/or destroying or damaging property. Recent instances of mass public disturbances include confrontations between authorities and protesters in Ferguson (USA, 2014) and Hamburg (Germany, 2017), between left- and right-wing activists in Charlottesville (USA, 2017), and numerous confrontations between authorities and football supporters around the EURO2016 tournament (France, 2016). Group violence around demonstrations, protests, football matches, and other recreational events generally is referred to as collective violence (Adang 2011). The provided phenomena suggest that collective violence may be defined as a violent form of collective action, to which large numbers of people may resort in response to a common stimulus (e.g., Reicher 2001). However, around the EURO2016 tournament hooligan sides<sup>1</sup> were also engaged in mutually arranged confrontations, which involved mutual consultation between the parties involved. In this article, we use the term collective violence to denote participation in hooliganism, riots and/or (arranged) group fights.

In the aftermath of incidents of collective violence, the question how and why 'things went wrong' is often posed. In efforts to provide an answer to this question, some scholars point towards the context in which the collective violence emerged, whereas others emphasize the personal characteristics of those involved. These contrasting views reflect an ongoing theoretical debate on the causes of collective violence. Already in the early 1900s, it was assumed that either people lose themselves entirely in

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Color versions of one or more of the figures in the article can be found online at [www.tandfonline.com/udbh](http://www.tandfonline.com/udbh).

<sup>1</sup>There are various definitions of the term 'hooliganism' (see Piquero, Jennings, and Farrington 2015). In this article, we will not dwell further on this discussion.

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a crowd, their behavior then becoming uncontrolled, unfocused and irrational, or that the violent behavior of crowds reflects the pre-existing tendencies of those belonging to it. This is a line of reasoning known as convergence theory. Both points of view were used as justifications to treat crowds as criminal (Reicher 2001). From the 1960s onwards these 'classic' perspectives were increasingly challenged. Studies suggested that collective violence largely is the outcome of rational behavior within a certain context, with crowd violence usually aimed at and being limited to the party held responsible for a certain course of events (Caplan and Paige 1968; Reicher 1987). Furthermore, studies challenged the notion that crowds in itself are deviant or criminal-minded (for an overview see Reicher 2001). Consequently, a group-dynamic approach to collective violence was developed to explain how crowd unity can be quickly achieved in changing circumstances and to explain why large numbers of people, despite the absence of an affiliation to violent groups or any prior criminal history, may come to participate in collective violence (Reicher 1984; Turner and Kilian 1987).

This group-dynamic approach eventually resulted in the development of the social identity model (SIM) of crowd behavior (Reicher 1996). Social identity refers to an individual's self-understanding as a member of a group and ensures that in an associated context an individual thinks, feels and behaves in accordance with the group he/she identifies with (salient identity). The SIM pertains that in crowds individual behavior is guided by the activated social identity, therewith presuming a shift from an individual to a categorical basis of behavioral control. Convergence theories emphasizing personal characteristics are, as a matter of principle, rejected by the SIM (Reicher 2001). Still, research finds that individuals differ in the social categories they identify, over the content of these categorical stereotypes and in their perception of who is prototypical of the groups identified (Herrera and Reicher 1998; Reicher and Hopkins 1996a, 1996b; Reicher and Sani 1998; Sani and Reicher 1998, 1999). Furthermore, offensive action tendencies in crowds have been linked to the experiencing of anger i.e. an individual's evaluation of the context (Mackie, Devos, and Smith 2000; Yzerbyt et al. 2003). This suggests that, despite renunciation by the SIM, individual characteristics linked to social information processing may render some individuals more susceptible than others for participating in collective violence.

Linking individual action in crowds to both social and individual-level processes may offer a possibility to bridge the theoretical gap between the SIM and convergence explanations for collective violence, and provide a more detailed account of who are most likely to engage in future collective violence. Until now, given the intellectual dominance of the SIM, whether and to what extent individual characteristics predict participation in collective violence has not been adequately addressed (Spaaij 2014; van Stekelenburg and Klandermans 2017). Therefore, in this study, we examine the personal characteristics of known collective violence offenders up to the moment of involvement in collective violence and the extent to which these characteristics predict persistence in collective violence offending. For this purpose, we gathered longitudinal data on a sample of 438 Dutch collective violence offenders.

### **Theories of collective violence**

As research provided more and more evidence that collective violence was not uncontrolled, unfocused and irrational, classic theories of crowd behavior stressing these issues gradually lost their credibility. Currently, dominant theories on collective violence instead emphasize the context in which collective violence occurs – with social identity being central to this point of view (van Zomeren, Postmes, and Spears 2008).

From a social identity perspective, trigger events and intergroup dynamics are assumed to facilitate (spontaneous) group forming and the emerging of antagonistic relationships between groups. Individuals involved in collective violence indeed often describe their relationships with others on a categorical, ingroup-outgroup level (Reicher 2001). Furthermore, individual behavior in crowds tends to remain within the boundaries defined as appropriate by the social identity of the group with which individuals identify, and only the behavior of those who are seen as belonging to the same group is followed (Drury and Reicher 1999, 2000; Reicher 1996). Herewith the social

identity perspective suggests that any person, regardless of individual characteristics, may get involved in collective violence given the 'right' circumstances (Reicher 2001).

Convergence theory, however, still has its supporters (Ball and Drury 2012). This in particular seems a consequence of the so-called specificity problem: The SIM does not account for the observation that, even in the face of trigger events and intergroup dynamics gravitating towards collective violence, a large majority (>90%) of individuals tends to leave the scene at the moment or just prior to the moment of violence occurring, or merely observes how the course of violent events unfolds, without themselves actively participating in any violent behavior (Adang 2011). Individual differences in behavior within groups during collective violence incidents suggest that, in addition to group-level triggers and processes, personal characteristics may have explanatory value with regard to individuals' participation in collective violence.

Violent behavior, both in groups and alone, has been linked to social information processing and the experiencing of anger (Crick and Dodge 1994; Mackie, Devos, and Smith 2000; Yzerbyt et al. 2003). Prior studies indicated that antisocial features, especially a tendency to interpret others' intent as hostile, heightened impulsivity, emotion-regulation deficits and attention/hyperactivity features, are linked to aggressive responses disproportionate to the actual situation (Bailey and Ostrov 2008; Coccaro, Bergeman, and McClearn 1993; Fetich et al. 2014; Owen 2011; Retz and Michael 2010; Schönenberg et al. 2013). In addition, sensation-seeking behavior has been found to increase the likelihood of participating in collective violence (Mustonen, Arms, and Russell 1996). Convergence theory is further supported by studies which find that perpetual engagement in collective violence is linked to personal characteristics like ADHD and ASPD, and a history of prior offending and violent behavior (Farrington 1994; Lösel and Bliesener 2003; Piquero, Jennings, and Farrington 2015). At the same time, however, many collective violence offenders have no criminal history up to their involvement in collective violence (Reicher 2001).

Rather than the general approach that characterizes both SIM and convergence theory stressing personal characteristics, an approach seems needed to accommodate both theoretical contradictions and contrasting empirical results. The problem behavior theory offers an approach capable of doing so. This theory explains problem behavior – behavior that may result in sanctions or other formal social responses, such as participating in collective violence – as an outcome of person–environment interaction (Jessor and Jessor 1977). More specifically, this theory suggests that personality characteristics, social environmental factors, and involvement with conventional values or institutions all contribute to the likelihood of engaging in problem behavior (Jessor 1991). This perspective suggests then that on the individual level, values, expectations, beliefs, and attitudes may contribute to participating in collective violence, while at the same time social environmental factors – such as high peer approval, the presence of peer models and high peer influence – have explanatory value. This fits observations of Adang (2011) who stresses variations in individual willingness to participate in collective violence while also underlining the relevance of group-dynamics.

In addition, the divergent criminal histories of individuals involved in collective violence as apparent from prior empirical work (Farrington 1994; Lösel and Bliesener 2003; Piquero, Jennings, and Farrington 2015; Reicher 2001) suggest that a typological approach may accommodate theoretical contradictions and contrasting empirical results. Moffitt's (1993) dual taxonomy provides the archetypical example of such a typological approach.<sup>2</sup> Central to the dual taxonomy is a distinction in the root causes of offending between offender types. Individual neurobiologically based determinants are deemed particularly relevant for those frequently and persistently involved in crime from a young age onward (life-course persistent offenders), whereas the criminal behavior of those who engage in crime only temporarily (adolescence-limited offenders) is thought to be governed predominantly by contextual clues (Moffitt 1997). Similarly, distinguishing collective violence offenders that only sporadically get involved in collective violence from those repeatedly getting involved in collective violence may help to reconcile theoretical and empirical inconsistencies in extant collective violence research.

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<sup>2</sup>Although studies have identified more offending trajectories, the heart of this line of thought remains undisputed (see Moffitt 2007).

### ***Offender typologies and prior empirical findings***

The exact merit of a typological approach to collective violence offenders thus far remains unclear. The few available studies into the criminal careers of collective violence offenders however seem supportive of a Moffitt-like typology. For instance, van Tom et al. (2016) found that while most collective violence offenders had no or only marginal criminal records, a small group of collective violence offenders displayed a high frequency of both solo and collective violence offending from an early age onward. Studies utilizing data from the Cambridge Study in Delinquent Development additionally suggested that individuals involved in football-related fights are more likely to be found in chronic offending trajectories (Piquero, Jennings, and Farrington 2015), to display impulsive behavior, to use alcohol and drugs heavily, to drop out of school at an early age and to be raised in families with poor parental supervision (Farrington 2006). These results are consistent with those of a study of 33 adult male hooligans from Germany who reported problem behavior as a child, problems with anger management and impulse control, and to be suffering from psychopathology associated with violent behavior (Lösel and Bliesener 2003). Prior cross-sectional studies linking personal characteristics to the self-reported likelihood of participating in collective violence largely confirm these results (Arms and Russell 1997; Russell 1995; Russell and Arms 1995, 1998). Finally, these findings connect to systematic observations which show important between-individual variation in the willingness to participate in collective violence (Adang 2011).

Taken together the violent behavior of different types of collective violence offenders may be triggered by different constellations of contextual and individual determinants. Thus far, a typological approach has been sparsely considered in the scientific debate about the contributing factors of collective violence involvement. The current study aims to contribute to knowledge on this matter.

### ***Current study***

Prior longitudinal studies on collective violence offenders have several shortcomings. First, samples have been relatively small – i.e. less than 40 (Farrington 1994, 2006; Lösel and Bliesener 2003; Piquero, Jennings, and Farrington 2015) – precluding any meaningful distinction between offender types. Second, prior samples seem to be biased towards persistent offenders. Lösel and Bliesener (2003) for instance studied individuals who at age 30 were still considered hard-core hooligans. Others only included individuals who self-reportedly had been in a group fight already as a minor (Farrington 1994, 2006; Piquero, Jennings, and Farrington 2015). Both persistence in offending in adulthood and early onset of offending are characteristics of the life course persistent pathway (Moffitt 1997). Third, prior cross-sectional research (Russell 1995; Russell and Arms 1995) focused upon hypothetical involvement in collective violence by administering questionnaires around sport matches. As these studies also did not apply a vignette design, contextual influences were not taken into consideration. Finally, results of the before mentioned van Tom et al. (2016) study, using a sample of collective violence offenders that compared to previous studies was less biased towards persistent offenders, indicated that various types of collective violence offenders can be distinguished based on the level and shape of their criminal trajectories. However, their study did not provide further information on the possible etiology of these offender typologies.

The current study aims to address the aforementioned shortcomings and to extend the findings of earlier research by studying personality traits, criminal career history and recidivism over a 4- to 5-year period (as a measure of persistence) of a current, representative, and, compared to prior studies, large sample of 438 known collective violence offenders. The questions around which this article is centered are whether individual characteristics associated with collective violence involvement can be identified and, if so, to what extent these characteristics can be linked to persistence in collective violence.

## Methods

### Sample

The 438 individuals included in the current sample were either (a) arrested for their involvement in at least one of two specific football-related collective violence incidents in 2011, (b) arrested during riots around a recreational event in 2012, or (c) were registered in 2012 in a database maintained by the Dutch Police due to their frequent involvement in football hooliganism in general. Individuals' criminal history from age 12 up to 2017 was assessed by means of retrieving data from the HKS (*Dutch: Herkenningsdienststelsel*) police system. The HKS contains information on every suspect arrested by the Dutch police and the indictable offences involved. Acquittals or discharges from further prosecution are removed, as are prosecutorial dismissals due to illegally obtained evidence, unlawful use of force or being wrongly accused. Since January 1, 2016 the HKS police system has been replaced by the BVI/BOSZ-system. Information registered in the HKS from 1 January 2010 was migrated to the BVI/BOSZ-system, which therefore also was consulted. The minimum age of legal responsibility in the Netherlands is 12. The HKS is only suitable for research since 1996 (Bijleveld 2007). Consequently, although data about their juvenile criminal career were retrieved, these data might be incomplete for individuals aged 33 or over in 2017 ( $n = 101$  in our sample).

### Recidivism

The moment of being involved in a collective violence incident or being registered due to frequent involvement in hooliganism (in, respectively, 2011 or 2012) was labeled as the index date. For all individuals in our sample, the age at the index date was recorded. In order to be able to assess the extent and type of recidivism (general, special, specific), all indictable offenses were categorized as non-violence (e.g., theft, burglary), violence offending (e.g., assault, aggravated assault) or collective violence offending. General recidivism was defined as being registered for any indictable offense after the index date, while special recidivism was defined as being registered for a violent offense after the index date. Finally, reregistration for participation in collective violence was regarded as specific recidivism.

For each type of crime identified in the current study, the following variables were created: 1) the total number of crime registrations before the index date, 2) age of officially registered onset of offending, 3) type of crime at age of onset, 4) time span between index date and first instance of re-offending, and 5) the total number of criminal registrations since the index date. Furthermore, when the individual had a history of violent offenses, a dichotomous variable was created indicating the number of settings (i.e. private – in a home; semi-public – in a bar or club; public – on the street) in which violence was resorted to (one setting versus multiple settings). To this end, the Dutch National Police registration system BVH (*Dutch: Basisvoorziening Handhaving*), in which police officers can provide a detailed description of events, was consulted. Due to data retention and privacy limitations however, the latter data only concerned a time span of 5 years up to the index date, thus starting from 2007/2008.

### Behavioral indicators of psychological traits

Privacy legislation prevented us from approaching sampled individuals in person with a request to participate in scientific research. In the absence of self-report, alternatives for gathering psychological data in the present setting had been limited. Institutions offering psychological care, for instance, are bound by privacy legislation concerning the nondisclosure of privacy-sensitive information. Furthermore, data available from Statistics Netherlands are limited due to the specific time frames to which these data relate and the aggregate level on which data could be disclosed. Confronted with these limitations, we resorted to the available police, Probation Service and forensic psychological data.

Only for 15 individuals in our sample forensic psychological reports prepared by the Netherlands Institute of Forensic Psychiatry and Psychology (NIFP) were available. In addition, for 113 individuals we obtained data from the Probation Service. The latter concerned information taken from a recidivism risk assessment instrument called the RISC ( $n = 66$ ), or a shortened version thereof ( $n = 47$ ) (see Hildebrand and Bosker 2011). For the entire sample, we also consulted the police registration system BVH. The BVH system allows police officers to add detailed descriptions of the behaviors and characteristics of those involved in the incident reported upon and includes verbatim elaborations of interrogations and individual statements. An implication of the various sources consulted is that data gathered on psychological traits either reflect diagnoses by validated instruments (NIFP), information about diagnoses based on conducted anamneses (NIFP and Probation Service) or information indicative of psychological and behavioral characteristics that, as far as can be derived, are not ascertained by psychological tests but rely on the disclosing of information by individuals themselves, by their family or by professionals well aware of the individual's personal situation (BVH). As the available data do not allow for a reliable assessment of psychiatric disorders, the current study is concerned with behavioral indicators reflecting individuals' psychological traits.

Particularly traits associated with violent behavior – such as attention-deficit hyperactivity disorder (ADHD), emotion-regulation deficits, heightened impulsivity, sensation-seeking behavior, and antisocial tendencies – have been implicated in participating in collective violence (Lösel and Bliesener 2003; Piquero, Jennings, and Farrington 2015; Russell 2004). Therefore, the psychological traits we focused upon are: 1) antisocial features, 2) attention/hyperactivity features, 3) heightened impulsivity, 4) emotion-regulation deficits and 5) sensation-seeking features. For each of these five behavioral indicators, a dichotomous variable was constructed indicating whether that behavioral indicator was present in the individuals' documentation or not. Presence of attention/hyperactivity features was scored when in the consulted sources specific references were made to Attention-Deficit Hyperactivity Disorder (ADHD) because of earlier diagnosis or pronounced suspicions without psychological examination or when references were made to the non-recreational, required use of prescription drugs (methylphenidate). The presence of antisocial features was scored when specific references were found to Antisocial Personality Disorder (ASPD) because of earlier diagnosis. Aggression-regulation deficits were scored when sampled individuals were reported to have followed an aggression control training, when they were reported to suffer from frequent tantrums, or when they were said to have an explosive or angered character. References to often acting impulsively, needing to learn to 'count to ten', or to act before thinking (especially in stressful situations) were considered indicative of heightened impulsivity. The presence of sensation-seeking behavior was scored when sampled individuals were described in the sources consulted as showing an increased need for excitement, looking for exciting situations, or getting a kick out of or loving exciting situations.

Because the behavioral indicators assessed may have manifested themselves already in childhood (Moffitt 1997), problematic childhood behaviors at home and at school were also assessed by a number of dichotomous variables. Indicative of problematic childhood behavior at home was aggressive behavior against family members and having been placed out of the family home. Likewise, problematic childhood behavior at school was considered present in case of aggressive behavior against peers or teachers, when attending special education – which consists of specialized or intensive supervision due to disability, chronic illnesses or psychological disorders – or in case of frequent truancy.

In order to prevent coding bias, behavioral indicators and problematic childhood behaviors were scored prior to analysis, thus without detailed knowledge of either the individuals' criminal histories or the nature and extent of their recidivism after the index date.



## Analysis

The current study used survival models to analyze the time in days until the first subsequent general, violence or collective violence offense following the index offense. Unlike linear regression models, survival models can handle censored data, that is cases in which the exact time to the first subsequent offense is unknown due to a limitation of the follow-up period (Hosmer, Lemeshow, and May 2008). Survival models control for censoring by decomposing the dependent variable into two parts: The time to event, and the event status – whether the event of interest occurred or not. Two time-dependent functions were estimated: The survival function representing the likelihood of survival – that is not experiencing the event of interest – and the hazard function representing the likelihood of the event occurring conditional on having survived up to that time. Here we estimated non-parametric Kaplan Meier models (Kaplan and Meier 1958) in order to graph overall survival in our data and univariately compare subgroups in our data. In order to conduct the multivariate analyses, Cox proportional hazard models (Cox David 1972) were applied. For the Cox proportional hazard models, we present only the results of the final model, which used the forward stepwise procedure to trim the model of non-significant variables.

## Results

### *Distribution of behavioral indicators and childhood problematic behavior*

Table 1 displays the presence of each of the behavioral indicators and measures of childhood problematic behavior in our sample of collective violence offenders. The figures displayed in Table 1 indicate that attention-deficit/hyperactivity features (13%), heightened impulsivity (13%), aggression-regulation deficits (18%) and increased need for excitement (10%) were present in a significant part of our sample. Furthermore, a significant part (16%) scored positively on at least two of the behavioral indicators assessed in this study. Childhood problematic behavior was present in a significant part of our sample as well. About 1 in 10 had displayed aggression against family members (9%), was placed out of home (7%), behaved aggressively at school (11%), attended special education (10%) or was reported to regularly miss classes (7%). Furthermore, a significant part (13%) scored positively on childhood problematic behaviors at home and at school.

In order to assess the association between behavioral indicators, childhood problematic behavior and collective violence offending, we utilized a variable that was constructed for the same sample in a prior study by van Tom et al. (2016). In this study, three criminal career trajectories up to becoming involved in collective violence were identified. These trajectories may be characterized as ‘non-offending up to collective violence involvement (n = 152)’, ‘prior offending up to collective violence involvement (n = 229)’ and ‘early onset and high frequency prior offending up to collective violence involvement (n = 57)’. To the extent that group dynamics instead of selection or convergence are relevant for participating in collective violence, an even distribution of the behavioral indicators of personality traits and childhood problematic behaviors among these three distinguished groups is expected. In contrast, an uneven distribution of these behavioral indicators would be supportive of a typological approach to collective violence offending incorporating both the SIM and convergence explanations, with psychological traits and childhood behavior problems expected to be particularly present among collective violence offenders with an early age of onset and high frequency of prior violent offending.

Table 1 provides the presence of behavioral indicators and childhood problematic behavior for each group. Chi-square analysis indicated that attention-deficit/hyperactivity features ( $\chi^2(2) = 52.795, p < .01$ ), antisocial features ( $\chi^2(2) = 48.4908, p < .01$ ), aggression-regulation deficits ( $\chi^2(2) = 39.9014, p < .01$ ), heightened impulsivity ( $\chi^2(2) = 78.0585, p < .01$ ) and an increased need for excitement ( $\chi^2(2) = 62.711, p < .01$ ) were more prevalent among early onset and high-frequency prior offenders. This pattern also emerged for childhood problematic behavior. Significant differences between groups were found for aggression against family members ( $\chi^2(2) = 36.110, p < .01$ ),

**Table 1.** Prevalence of behavioral characteristics and childhood problematic behaviors for a sample of collective violence offenders (n = 438) per subtype as identified by van Tom et al. (2016).

Measure	Non-offenders up to involvement (n = 152)	Prior offenders up to involvement (n = 229)	Early onset and high frequency prior offenders (n = 57)	Total (n = 438)
	%	%	%	%
<b>Behavioral characteristics</b>				
Attention-deficit/hyperactivity features*	10%	7%	42%	<b>13%</b>
Antisocial features*	0%	1%	18%	<b>3%</b>
Aggression-regulation deficits*	8%	18%	46%	<b>18%</b>
Heightened impulsivity*	3%	11%	49%	<b>13%</b>
Increased need for excitement*	3%	7%	39%	<b>10%</b>
<b>Number of behavioral characteristics</b>				
Single behavioral characteristic	13%	14%	12%	<b>13%</b>
Multiple behavioral characteristics (n = 2)*	3%	9%	25%	<b>9%</b>
Multiple behavioral characteristics (n > 2)*	1%	4%	37%	<b>7%</b>
<b>Childhood problematic behavior</b>				
Aggression against family members*	3%	8%	30%	<b>9%</b>
Placed out of home*	5%	4%	23%	<b>7%</b>
Aggressive behavior at school*	7%	5%	42%	<b>11%</b>
Attending special education*	7%	7%	30%	<b>10%</b>
Frequent truancy*	6%	2%	30%	<b>7%</b>
<b>Number of childhood problematic behaviors</b>				
Single childhood problematic behavior*	8%	9%	23%	<b>10%</b>
Multiple childhood problematic behaviors (n = 2)*	5%	3%	26%	<b>7%</b>
Multiple childhood problematic behaviors (n > 2)*	3%	3%	23%	<b>6%</b>
<b>Cumulative risk factor index</b>				
At least 1 of both*	10%	10%	63%	<b>17%</b>
At least 2 of both*	3%	3%	37%	<b>7%</b>
At least 3 of both*	1%	1%	18%	<b>3%</b>

\* $p < .01$ .

having been placed out of home ( $\chi^2(2) = 26.4081, p < .01$ ), aggressive behavior at school ( $\chi^2(2) = 72.070, p < .01$ ), having attended special education ( $\chi^2(2) = 31.069, p < .01$ ) and frequent truancy ( $\chi^2(2) = 53.49, p < .01$ ). Additional analysis taking into account the total number of behavioral indicators reflects the multi-problem character of early-onset and high-frequency prior offenders. Chi-square analyses indicated that this subgroup more often had two ( $\chi^2(2) = 22.6051, p < .01$ ) or more ( $\chi^2(2) = 85.3341, p < .01$ ) behavioral indicators. Similar results were found for the prevalence of two ( $\chi^2(2) = 39.616, p < .01$ ) or more ( $\chi^2(2) = 35.608, p < .01$ ) problematic childhood behaviors. In addition, a cumulative risk factor index was calculated for the 75 individuals who scored positive on at least 1 behavioral indicator and at least 1 childhood problematic behavior. Chi-square analysis indicated that at least one of both ( $\chi^2(2) = 97.877, p < .01$ ), at least two of both ( $\chi^2(2) = 86.161, p < .01$ ) and at least 3 of both ( $\chi^2(2) = 44.617, p < .01$ ) were more prevalent among early onset and high-frequency prior offenders.

Our analyses thus suggest an uneven distribution of behavioral indicators and childhood problematic behavior in our sample of collective violence offenders. These findings appear to contrast a core principle of the SIM, which propagates that offender characteristics do not contribute to explanations of collective violence. Specifically, the uneven distribution of behavioral indicators and

childhood problematic behaviors, their higher presence among the early onset and high frequency prior offending group, and the multi-problem character of this subgroup indicate that root causes for these offenders' participating in collective violence may diverge. We therefore interpret this finding as a first sign that a typological approach incorporating insights from both social identity and convergence theories may have merit in the explanation of collective violence.

**Survival analysis**

When involvement in collective violence is the mere result of coincidentally being in the wrong place at the wrong time, chances are low that an individual becomes involved in collective violence more frequently. Recidivism therefore may be regarded as reflecting persistence. Insofar as convergence and selection are involved in collective violence offending, expectations were that individuals' criminal career history, behavioral indicators, and childhood problematic behaviors assessed in this study would predict collective violence reoffending. On the other hand, when instead of convergence mainly social processes affect becoming involved in collective violence, no differences are expected between individuals who re-offended and those who didn't.

In order to establish general, special and specific recidivism in our sample (n = 438) after the index date, we conducted survival analysis. From Figure 1, it can be derived that for about the first 6 months, the survival rate follows a similar trend for general, violence and collective violence offending. Thereafter, survival rates dropped sizably faster for general crime compared to violent crime and collective violence, while the survival rate for violent crime dropped faster compared to collective violence. Survival rates at the end of the follow-up period were about 50% for general recidivism, 64% for special (violent) recidivism and 80% for specific (collective violence) recidivism.

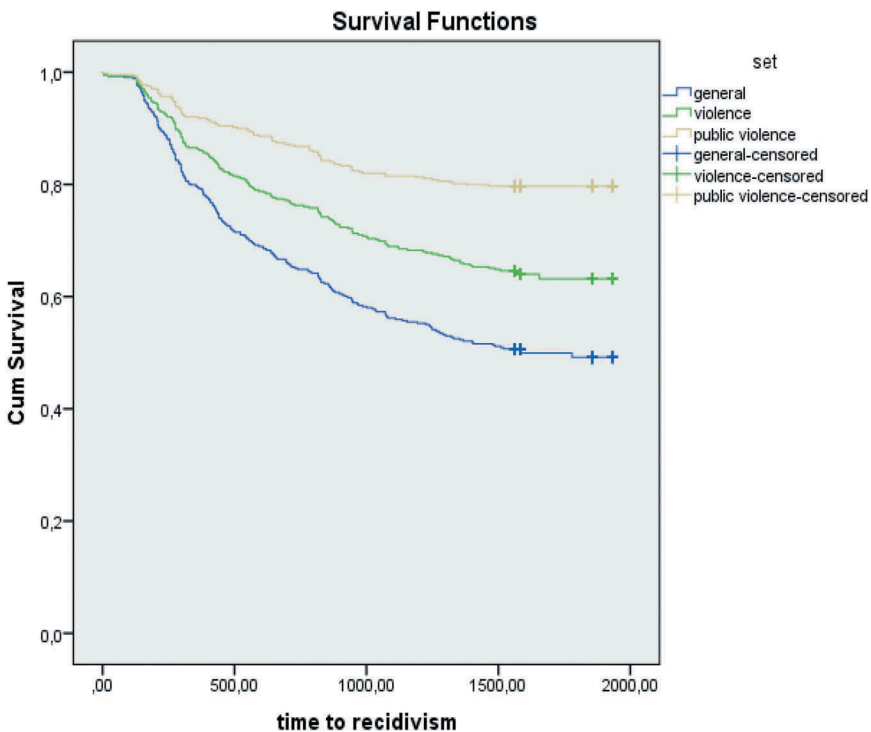


Figure 1. Survival analysis within a sample (n = 438) of collective violence offenders for general, special and specific recidivism in number of days.

Consequently, results indicate that about a third of our sample reoffends violently (36%) and a fifth does so in a group (20%).

Subsequently, bivariate analyses were conducted to examine whether collective violence recidivists ( $n = 89$ ) and non-recidivists ( $n = 349$ ) differed on criminal career measures, behavioral indicators of psychological traits and childhood problematic behavior (see Table 2). From Table 2 can be derived that recidivating collective violence offenders more often displayed violent behavior in multiple settings (21%) compared to collective violence offenders who did not re-offend (12%) ( $\chi^2(1) = 5.132, p = .023$ ). ANOVAs further indicate that recidivating collective violence offenders were younger at the moment of their first police contact for general ( $F(1, 436) = 7.605, p < .01$ ), violent ( $F(1, 436) = 6.385, p = .012$ ) and collective violence offending ( $F(1, 436) = 6.231, p = .013$ ). Furthermore, the mean number of prior general ( $F(1, 436) = 7.467, p < .01$ ), violent ( $F(1, 436) = 11.763, p < .01$ ) and collective violence offenses ( $F(1, 436) = 19.317, p < .01$ ) was higher among those persisting in collective violence. With regard to behavioral indicators, significant results were found for the prevalence of attention-deficit and/or hyperactivity features ( $\chi^2(1) = 3.996, p = .046$ ), heightened impulsivity ( $\chi^2(1) = 6.389, p = .011$ ) and an increased need for excitement ( $\chi^2(1) = 6.247, p = .012$ ). No significant differences were found with regard to antisocial features and aggression-regulation deficits or with regard to childhood problematic behavior. Finally, analyses indicated that recidivating collective violence offenders more often (12%) had at least three behavioral indicators compared to those who did not re-offend (6%) ( $\chi^2(1) = 4.212, p = .004$ ), and that

**Table 2.** Differences between collective violence offending recidivists and non-recidivists ( $n = 438$ ).

Measures	Collective violence re-offending	
	Yes ( $n = 89$ )	No ( $n = 349$ )
	Mean (SD)	
Criminal career		
Mean age of onset criminal career**	17.8 (3.0)	19.3 (4.9)
Mean age of onset violent crime*	18.6 (3.0)	20.0 (5.0)
Mean age of onset collective violence*	19.7 (3.4)	21.2 (5.4)
Offenses before index date**	5.9 (6.7)	3.7 (6.8)
Violent offenses before index date**	3.9 (4.4)	2.3 (3.8)
Collective violence offenses before index**	2.1 (2.6)	1.1 (1.7)
Measures	%	
Criminal career		
Being violent in various settings*	21%	12%
Behavioral indicators		
Attention-deficit and/or hyperactivity features*	19%	11%
Antisocial features	0%	3%
Aggression-regulation deficits	24%	17%
Heightened impulsivity**	22%	11%
Increased need for excitement*	17%	8%
Number of behavioral indicators		
Single behavioral indicator	15%	13%
Multiple behavioral indicators ( $n = 2$ )	12%	8%
Multiple behavioral indicators ( $n > 2$ )*	12%	6%
Childhood problematic behavior		
Aggression against family members	10%	9%
Placed out of home	6%	7%
Aggressive behavior at school	16%	9%
Attending special education	15%	9%
Frequent truancy	10%	6%
Number of childhood problematic behaviors		
Single childhood problematic behavior	12%	9%
Multiple childhood problematic behaviors ( $n = 2$ )*	12%	5%
Multiple childhood problematic behaviors ( $n > 2$ )	6%	5%
Cumulative risk factor index		
At least 1 of both	27%	22%
At least 2 of both*	13%	6%
At least 3 of both	4%	3%

\* $p < .05$ ; \*\* $p < .01$ .

recidivating collective violence offenders more often (12%) displayed two childhood problematic behaviors than non-recidivists (5%) ( $\chi^2(1) = 5.316, p = .021$ ). One significant difference between collective violence recidivists and non-recidivists was found within the cumulative factor index; collective violence recidivist more often had at least two or more risk factors with regard to both behavioral indicators and childhood problematic behaviors ( $\chi^2(1) = 6.294, p = .012$ ).

Again, these findings suggest that convergence or selection processes may contribute to collective violence offending. This in particular concerns criminal career measures with regard to the age of onset and frequency of offending as measured by police arrest, and behavioral indicators associated with violent behavior, particularly when multiple behavioral indicators are present. Additional analyses not displayed here furthermore indicated that offender characteristics associated with collective violence recidivism overlap with those of solo violence re-offending. Together these findings indicated that individuals who re-offended violently, whether alone or in a group, differ significantly from individuals who did not on similar criminal career measures and behavioral indicators. This suggests that risk factors for solo and collective violence offending are partly the same and that more frequent involvement in collective violence appears to not only be determined by social processes as stated by the SIM.

### Cox-regression analysis

Finally, a multivariable Cox-regression analysis was conducted, of which the results are depicted in Table 3. Table 3 can be derived that behavioral indicators contribute to collective violence re-offending. Of the three behavioral indicators (attention-deficit/hyperactivity features, heightened impulsivity and increased need for excitement) that, given the results of prior research might be of relevance in explaining persistence in collective violence, only attention-deficit/hyperactivity features were found to contribute independently. This behavioral characteristic was found to more than double the likelihood of persistence in collective violence ( $\text{Exp}(B) = 2.135, p = .006$ ). In addition, criminal career measures – age at onset of offending ( $\text{Exp}(B) = .937, p = .047$ ) and the number of prior collective violence offenses ( $\text{Exp}(B) = 1.17, p = .001$ ) – were found to influence survival. Because the current sample of collective violence offenders was identified from different sources – a database of known hooligans, two football-related collective violence incidents and a riot around a recreational event – we controlled for the diverging nature of the ‘index event’ by distinguishing between football-related and non-football related samples ( $\text{Exp}(B) = 2.303, p = .018$ ). We found recidivism as measured by police registrations was higher in the non-football-related sample. In the Netherlands, a comprehensive preventive and individual-oriented repressive approach is applied to persons who partake in football-related violence. Although data are lacking to substantiate this claim, for the football-related subsamples this approach may have influenced persistence.

In sum, findings of the Cox-regression analysis indicated that a number of offender characteristics are associated with persistence in collective violence. This again suggests that individual characteristics are not to be totally disregarded when explaining collective violence, as has been argued by the SIM.

**Table 3.** Determinants of persistence in collective violence in a sample of collective violence offenders (n = 438).

Measure	B	SE	Exp (B)	95% interval (low/high)
Collective violence offending				
Age at onset*	-.065	.033	.937	.879/.999
Number of collective violence offenses before index date**	.157	.047	1.170	1.067/1.282
Context of incident: recreational*	.834	.351	2.303	1.157/4.585
Attention-deficit and/or hyperactivity features **	.759	.274	2.135	1.247/3.654

\*  $p < .05$ \*\*  $p < .01$

## Discussion

Over the past decades, collective violence has been predominantly explained from a group-dynamic perspective stressing the role of social processes. Central to this group-dynamic perspective is the SIM. The SIM explains how to trigger events and group dynamics may result in antagonistic intergroup relationships, which subsequently may affect an individual's decision to participate in collective violence (Reicher 2001). Doing so, the SIM disregards that personal characteristics of those participating in collective violence may also have explanatory value – the position taken by convergence theories (Ball and Drury 2012).

While there is little doubt that group dynamics influence crowd behavior, individual evaluations of crowd situations do vary (Reicher and Sani 1998; Sani and Reicher 1998, 1999). Furthermore, the emotions these evaluations invoke, particularly anger, have been implicated in aggressive action tendencies in crowds (Mackie, Devos, and Smith 2000; Yzerbyt et al. 2003). Various psychological traits have been implicated in aggressive behavior in both non-provocative and provocative situations, a number of which have been previously linked to behaving violently in a group (Farrington 1994; Lösel and Bliesener 2003; Piquero, Jennings, and Farrington 2015). Supporting the core principle of convergence theory, this suggests that offender characteristics may be linked to violent behavior in collective settings after all.

In Western societies such as the Netherlands, collective violence generally occurs around demonstrations, protests, football matches, and other recreational events (Adang 2011). The current article is concerned with individuals who have been involved in collective violence around football matches and recreational events, which may – at least by outsiders – be perceived as issue-irrelevant and hedonistic (Marx 1970). The social identity perspective aims to explain how and why collective violence occurs, regardless of the setting in which it takes place. Consequently, though limited in its scope, the sample used in this study offers a possibility to assess whether individual characteristics contribute to participating in collective violence.

The results of our study showed that our sample of collective violence offenders is characterized by a problematic background with regard to behavioral indicators and childhood problematic behavior. This finding fits with behavior theory, which suggests that involvement in any one problem behavior increases the likelihood of an individual displaying other problem behaviors as well (Jessor 1991). Differentiating between three groups – ‘non-offending up to involvement’, ‘prior offending up to involvement’ and ‘early onset and high frequency prior offending up to involvement’ – our analysis indicated behavioral indicators and childhood problematic behavior were particularly present among collective violence offenders with an early age of onset and high offending frequency. Furthermore, co-occurrence of these characteristics in particular was prevalent among this subgroup of collective violence offenders, indicating their multi-problem character. As such, this subgroup is reminiscent of Moffitt's life-course persistent offender, suggesting that the premise of convergence theory might be limited to a subgroup of collective violence offenders, namely those who more frequently and persistently offend. About one in five offenders showed persistence in collective violence offending, in the sense that they had been apprehended for this offense at least once more by the police within four to 5 years after the index date. Substantiating our findings, behavioral indicators of psychological traits linked to violent offending predicted collective violence recidivism. Also, multi-problem backgrounds as reflected in the presence of multiple behavioral indicators and childhood problematic behaviors were more prevalent among individuals persisting in collective violence. Finally, Cox-regression analyses indicated that various individual characteristics independently contribute to persistence in collective violence offending. Taken together, contrasting currently dominant theoretical views on collective violence, our findings showed that persistence in collective violence is associated with the presence of distinguishing offender characteristics.

Our findings have implications for collective violence research. Many collective violence studies have emphasized the social processes leading up to collective violence and disregarded personal and psychological characteristics of those actually involved (for an overview see Reicher 2001). These studies to a large extent rely on participant observations and interviews (Adang 2018). It, however, has been argued that these

research methods are unable to construct trustworthy accounts of events i.e. may be biased or even speculative (Johnson and Sackett 1998; Waddington 2012). Our findings suggest that in a given collective violence incident different subgroups may be distinguished for which the root causes of participating in the violence diverge. For some, the reasons for participating appear to not, or at least to not only be related to antagonistic group dynamics, but may also concern motives more directly linked to individual characteristics. First of all then, our results suggest that future collective violence studies should account for, and incorporate both group-dynamic and convergence explanations. This connects to the recently proposed initiation-escalation model of public disorder, which – by referring to the so-called young-male syndrome – also argues for an approach to collective violence that includes a contribution to collective violence of contextual and individual determinants (Adang 2011). Particularly with regard to the latter, possibilities of gathering data on individual characteristics data need to be explored. As in the present absence of large-scaled (survey) studies particularly aimed at collective violence offenders, validated measures or clinical interview data are likely to be unavailable, researchers may have to rely on alternative measures, as we did here. Another aspect deserving research attention, given the likely different underlying causes of participating in collective violence, is to what extent the presence and ratio of these specific subgroups may influence the total crowd's group dynamics. This question in particular concerns the presence of groups of individuals who are repeatedly involved in collective violence. A qualitative case study in the Netherlands concluded that such groups may actively instigate a large-scale riot (Muller et al. 2010).

Our study may also offer input for discussing the conceptualization of collective violence. Its current conceptualization, around which social identity explanations are centered, assumes collective violence is reactive and largely centered around the motive of retribution. This conceptualization appears limited compared to current typological distinctions of violence. The quadripartite violence typology (QVT), for instance, states that differentiating between the affect underlying violence (negative/positive) and its nature (impulsive/controlled) allows for a richer representation of motivations for violence (Howard 2015). The main motivations distinguished in the QVT are 1) excitement-seeking (positive affect, impulsive), 2) greed for social dominance or goods (positive affect, controlled), 3) revenge (negative affect, controlled) and 4) self-defense (negative affect, impulsive). The results of our study indicate that underlying causes for participating in collective violence may diverge between individuals. Consequently, future research may conceptualize collective violence around the motivations for violence identified in the QVT and/or the recently proposed initiation-escalation model of public disorder, which argues that collective violence may also arise by the mere presence of a rival group (Adang 2011). The fact that groups known for their frequent participating in collective violence are also involved in arranging confrontations with like-minded groups (Cleland and Cashmore 2016) further substantiates this reasoning.

In sum, our findings indicate that some individuals are more likely than others to persist in collective violence. This specifically appears to concern a relatively small subgroup of collective violence offenders whose personal and criminal profiles resemble that of Moffitt's life-course persistent offender. Participating in collective violence for these individuals appears to reflect a general violent lifestyle that can be linked to the presence of multiple problem traits and behavioral characteristics. A first implication for intervention and prevention strategies may be to consider the relevant characteristics for determining the individual's risk of recidivism. Subsequently, such information may be utilized in order to assess which collective violence offenders qualify for a person-oriented approach – a kind of approach that, at least in the Netherlands, is already customary for individuals who regularly participate in football-related collective violence and might be broadened to individuals repeatedly engaging in other types of collective violence as well. During the course of the current research however, it has proven to be extremely difficult to find reliable information on the personal characteristics of collective violence offenders. At the same time, this study suggests that such information is relevant both theoretically and in practice. The consistent gathering and recording of such information in the aftermath of future collective violence incidents are therefore recommended.

When drawing conclusions based on the current findings, it is however important to keep in mind the limitations of our data. First, official police data in all likelihood underestimate actual offending. Although those having extensive criminal careers may be more likely to be apprehended (Ball and Drury 2012), chances of apprehension in general are low. Furthermore, as applies to all criminological studies making use of register data, registration of a particular (type of) crime and subsequent arrest are dependent on the investigation policy of the police and the prosecution policy of the Public Prosecution Service. The extent that collective violence is either high or low on the political agenda may therefore have influenced our measure of persistence (recidivism). Second, police data regarding collective violence incidents do not address its context or its scale beyond the legal minimum of three individuals involved (i.e. a full-blown riot or a bar room brawl). As the social identity model has been utilized to explain both large-scale rioting and the escalation of night-time economy aggression (Levine et al. 2012), this seems less problematic for making a contribution to the theoretical debate on explanations for collective violence. Third, the behavioral indicators and childhood problematic behavior data gathered in this study did not reflect psychiatric disorders and personality traits as assessed by clinical diagnoses. Two aspects play a role here. First of all that – precisely due to adhering to the currently dominant theoretical insights – in practice no systematic attention is paid to the psychological characteristics of those engaging in collective violence. In Dutch practice, forensic psychological reports are usually only drawn up in case of serious offenses such as murder, manslaughter, and sexual offenses. Consequently, to assess the presence of psychological traits and childhood problematic behavior there are few alternative data sources for the current sample outside of law enforcement parties such as the police and the Dutch Probation Service. Limited availability of suitable data is thus to some extent intrinsic to exploring new research directions. In order to address this issue, the presence of behavioral indicators of psychological traits and childhood problems was operationalized by means of standardized criteria applied to the sources consulted. Our results show that behavioral indicators are linked to persistence in collective violence offending. Although the currently applied method has its limitations, this suggests it does not result in findings that contrast earlier studies on violent offending.

## Conclusion

Over the past decades, scholars have predominantly taken a group-dynamic approach to explain why individuals partake in collective violence despite the absence of an extensive criminal record or an affiliation with violent groups. This point of view disregards that even in the ‘right’ circumstances most people do not act violently, leaving unexplained why some individuals involve themselves in collective violence while others don’t. Individuals have been found to differ in their evaluation of social situations. As social information processing is influenced by psychological traits that are linked to violent offending, in this article we argue that, next to group-dynamic processes, psychological traits may influence collective violence involvement.

Combining criminal career measures, behavioral indicators and information on childhood problematic behaviors suggests that particularly those persistently involved in collective violence offending show psychological traits that may predispose them towards violence. Therewith our findings are in line with the typological approach common in life-course criminology, suggesting that different types of collective violence offenders may be identified for whom the root causes of collective violence involvement diverge. Given the association between behavioral indicators and specific recidivism, crowd composition may influence the extent to which individual and contextual determinants contribute to collective violence per given collective violence incident.

In the continuing debate concerning the relative contribution of individual and contextual determinants on collective violence, so far offender typologies have not been considered. The current study, which included a relatively large sample of collective violence offenders, suggests that a typological approach may be employed to address and reconcile contrasting empirical findings and theoretical vantage points. Our results may be utilized to further develop a theoretical approach that addresses a contextualized group-dynamic understanding of collective violence as well as variations in individuals’ willingness to become involved.



## Notes on contributors

**Tom van Ham** (1983) started his studies at the VU University Amsterdam in 2002. In 2007 he obtained his MSc degree in both clinical neuropsychology and criminology. Next to his fulltime job (Bureau Beke, Arnhem, 2009–2019) he became an external doctoral candidate in a project about the determinants of collective violence involvement at Leiden University, which started in 2013.

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**Theo Doreleijers** is emeritus professor of Child and Adolescent Psychiatry at the Amsterdam Universities Medical Centers, and professor of Forensic Psychiatry at the Leiden University Faculty of Law (1997–2013). His last appointment was the research directorship of the Academic Workplace at De Nieuwe Kans (AW-DNK). He was (co) supervisor of some forty PhD-projects, mainly on conduct disorders and youth crime. He is honorary president of the European Association for Forensic Child and Adolescent Psychiatry, Psychology and other involved professions (EFCAP), and member of the Council of Criminal Law Enforcement and Youth Protection (RSJ). He obtained the University's Societal Impact Award for his research (2010) and the University's Best Lecturer Award (2013).

**Otto Adang** became Professor of Security and Collective Violent Behavior at the Faculty of Behavioural and Social Sciences of the University of Groningen (2016). Adang continued the chair in Public Order Management at the Police Academy of the Netherlands (since 2004). The aim of his chair is to contribute to new theories, research, teaching and valorization of knowledge about the mechanisms in collective violent behavior, and which enhance or detract from the security of situations during interaction between government and citizens. Adang's studies focus on aggression, reconciliation and collective violent behavior in relation to public order enforcement. Since 1998, he has also headed a research programme entitled Managing Dangerous Conflict Situations, which focuses on the interaction between police and citizens.

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