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Veröffentlichungsversion / Published Version

Zeitschriftenartikel / journal article

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#### Empfohlene Zitierung / Suggested Citation:

Carol, S., Peez, F., & Wagner, M. (2019). Delinquency among majority and minority youths in Cologne, Mannheim and Brussels: the role of religion. *Journal of Ethnic and Migration Studies*, 45, 1-27. <https://doi.org/10.1080/1369183X.2019.1620415>

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**Article — Published Version**

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Journal of Ethnic and Migration Studies

**Provided in Cooperation with:**  
WZB Berlin Social Science Center

Suggested Citation: Carol, Sarah; Peez, Freya; Wagner, Michael (2019) : Delinquency among majority and minority youths in Cologne, Mannheim and Brussels: the role of religion, Journal of Ethnic and Migration Studies, ISSN 1469-9451, Taylor & Francis, London, Vol. 45, Iss. Latest Articles, pp. 1-27,  
<http://dx.doi.org/10.1080/1369183X.2019.1620415>

This Version is available at:  
<http://hdl.handle.net/10419/214897>

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# Delinquency among majority and minority youths in Cologne, Mannheim and Brussels: the role of religion

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## ABSTRACT

The news about sexual assaults and robbery committed by mostly young North African males on New Year's Eve of 2015/2016 in Cologne and elsewhere went around the world. It triggered a revival of the question of the role religion plays in crime, in particular whether Muslims are more criminal. To answer this question, we investigate ethnic minority and majority youths' delinquency in Cologne, Mannheim (Germany) and Brussels (Belgium) using unique large-scale datasets. Our results indicate that youths in Cologne are not exceptionally violent. In line with previous research, we find that religiosity is overall accompanied by lower levels of delinquency (vandalism, property offence, drug abuse, bullying), particularly among Muslims. However, in the case of violence, we reveal the opposite pattern. Yet, we discover that these acts are primarily committed by youths who describe themselves as religious without practising the abstinent lifestyle (i.e. abstaining from binge drinking) prescribed by some religions.

## KEYWORDS

Delinquency; religion; abstinence; Islam; Germany

## 1. Introduction

The events of New Year's Eve, 2015/2016 in Cologne are still fiercely debated. About 600 persons were robbed, beaten or sexually harassed, some were even raped. Media reports quickly pointed towards men from North African countries as the main suspects (Polizei Köln 2016; Staatskanzlei 2016). This has unleashed a controversy in the media (e.g. TAZ, Kölner Stadtanzeiger) about the clash of cultures, especially the influence of ethnic and religious backgrounds on crime (Hennen 2016; Klask 2016). As these events have coincided with waves of mostly Syrian, Iraqi and Afghan refugees arriving in Germany, the incident has fuelled a discussion about immigration and its consequences for social cohesion in Germany. In response to the media portrayal of these groups (primarily composed of Muslims), the Council of Muslims (*Zentralrat der Muslime*) has repeatedly emphasised that Muslims who take their religion serious do not commit these and other crimes (Wirtz 2016; Zeit 2016).

The societal reactions to this event have not only focused on the refugee status and country of origin of these male immigrants but also triggered the revival of a classic research question in criminology: How does religiosity relate to delinquency? The question

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is arguably highly relevant in Germany. Germany has been an immigration country for more than 50 years: Post-war West Germany experienced – like other Western European countries – waves of guest-worker migration, primarily from Turkey and Southern Europe (Bade and Oltmer 2007). Despite vast developments in socio-economic integration (e.g. Alba, Sloan, and Sperling 2011), the question of minority integration is not off the table, and it is still intensely debated. Slowly, the focus of the debate has shifted from ethnicity to religion, borrowing from earlier debates taking place in the US. The debates in the US and Europe are fundamentally different, however, which makes it interesting to complement findings for the US with those for Europe. While immigrant religions are often viewed as bridges to integration in the US, they are conceived as a barrier to integration in Europe (Foner and Alba 2008). Similarly, studies from the US, and their insights into the relationship between crime and religiosity, are difficult to transfer to the European context due to its different religious structures and composition. The US is a country with a large population of Christians who are on average fairly religious (Norris and Inglehart 2012); the Muslim minority population is relatively small (Smith 2015). Germany, by contrast is home to approximately four million immigrants and their descendants from countries with a Muslim majority (Laurence 2012). This relatively religious minority faces a relatively secularised majority group without migration background (e.g. Diehl and König 2009). The rare findings on Muslim minorities in the US are also difficult to transfer to Europe, as these minorities are on average more educated than those in Europe (Sander 2010).

While the tenor of the European debate pointed to higher levels of crime and delinquency among minorities from countries with a Muslim majority (e.g. Baier et al. 2010), religious denomination should not be equated with individual levels of religiosity – Muslims and Christians are not homogeneous groups. As we will outline in our theoretical framework, there are well-established theories that predict both lower and higher levels of crime and delinquency among the pious.

We therefore add to the debate an empirically and theoretically comprehensive overview of the role of religiosity for a broad set of delinquency measures across different religious denominations and ethnic groups (as a proxy for the denomination), while taking other important explanatory factors such as parents' level of education and monitoring, peers, and experienced violence into account. We base our analyses on large-scale survey data collected in the last decade among youths in two cities with a high percentage of immigrants as well as their descendants – Cologne (30%, Ministerium für Arbeit, Integration und Soziales des Landes Nordrhein-Westfalen 2016) and Mannheim (44%)<sup>1</sup> in Western Germany. To cross-validate our findings on youths in Cologne and Mannheim (Germany), we investigate in a second analyses, youths in Brussels (Belgium), which is situated near Cologne and Mannheim and characterised by a high level of diversity. About 32% of Brussel's population were born abroad (statistics are based on nationality and place of birth, Deboosere et al. 2009). Recently, Brussels also became focal point of coordinated crime where terrorists committed attacks in the name of religion (Fyffe 2016). We differentiate in our analyses between youths without immigrant background (abbreviated with the term 'majority youths') and youths of immigrant origin, which means that they have at least one parent who immigrated to Germany or Belgium. We label this group 'minority'. Minority youths are particularly interesting to study as they tend to exhibit higher probabilities to commit crimes compared to the first generation of migrants (Tonry 1997).

While the media debate hints at a negative role of religiosity, this relationship is far from being conclusive in the scholarly debate. A large majority of studies have found religiosity to be linked with a lower likelihood of crime (C. J. Baier and Wright 2001). However, for certain immigrant groups, recent studies (e.g. Baier 2014) have also discovered the opposite in connection with violence. As this finding has been the subject of some controversy, we would like to revisit this finding in multivariate analyses. To the theoretical debate we contribute a refined argument on the religiosity–crime link by specifying the effect of religiosity for different types of religious followers. We group individuals along the two dimensions of subjective religiosity and the amount of alcohol consumed in the past (as one indicator for an abstinent lifestyle). We distinguish between those who are seriously religious and abstained from binge drinking in the past (type I) versus those who only perceive themselves to be religious without living an abstinent lifestyle (type II). In addition, we distinguish between those who do not describe themselves as religious but abstain (type III) and those who do not describe themselves as religious and do not abstain from binge drinking (type IV). Recent terrorist incidents have taught us that a new profile of violent actors is crystallizing out: one in which individuals combine a strong religious identification with a previous lifestyle that is not in keeping with that identification in its drug and alcohol excesses (Hopkins 2015; Kanol *Forthcoming*; Kiefer et al. 2017; Lutz and Reuscher 2017). Our paper also represents a methodological contribution to existing research by investigating meaningful locations, including a wide array of delinquency measures and employing sophisticated multi-level modelling techniques, which have often been lacking in previous research (see Adamczyk, Freilich, and Kim 2017).

Our study underlines that, in most cases, individual religiosity seems to suppress delinquency. However, we find exceptions to the rule if we look at victim-involved violence. We unearth that those youths who describe themselves as religious but have not always followed an abstinent lifestyle (i.e. engage in binge drinking) are the ones who are more violent. Finally, delinquency can be partly traced back to perceptions of exclusion and deprivation. Our findings have important implications for the scholarly and societal debate that have either deemed religion as a breeding ground of conflict or as a blessing. Generally speaking, binge drinking might be an indicator of a group subculture that also includes other elements including an orientation towards more radical elements in the religious community.

## 2. Theoretical background

### 2.1. *The relationship between crime and individual religiosity*

The term ‘crime’ denotes a behaviour that violates the institutionalised norms of a society by breaking rules or laws, and is stronger than deviance (norm-violating behaviour according to Jenness and Goodman 2006; and perceived so by others, e.g. Lamnek 2007). Thus, it can be formally sanctioned (Scott and Marshall 2005). Criminal behaviour of juveniles, most commonly labelled as ‘delinquency’, emphasises their minor significance in comparison to criminal behaviour of adults (Williams and McShane 2003, 119). The perception of whether an act is delinquent is therefore subject to the definition of societal and legal standards of the group in power (Lamnek 2007).

In line with previous research, we distinguish between crimes causing physical (e.g. physical violence) and psychological harm (e.g. bullying), as well as acts involving objects (e.g. property offence and vandalism). Additionally, substance use is a prominent indicator for victimless crime (Adamczyk 2012; Baier 2014; Pirutinsky 2014).

Religion is an important feature in understanding criminal behaviour: in the past, religious communities defined moral and immoral behaviour, which also extended to criminal behaviour (Palmisano 2001, 134). Against this backdrop, we consider it important to revisit the role of religiosity for criminal behaviour. Four hypotheses have been put forward by previous research that can help us to understand the relationship between criminal behaviour and religiosity. First, the *hellfire hypothesis*, introduced by Hirschi and Stark (1969), states that religious people will refrain from sinful and illegal acts, in fear of suffering in hell after death. The concept of sin is inherent to all religions, and believers are compelled to pray and confess to make up for their sinful behaviour. Christian religious communities propagate the golden rule that you should do to others as you would have them do to you (e.g. Luke 6:31) but also Muslim communities have similar rules (e.g. “None of you truly believes until he wishes for his brother what he wishes for himself”, An-Nawawī, Kitab Al-Arba’in Forty Hadith 13, 256. Koranic verse) because they have a strong interest in promoting social conformity, law-abiding behaviour and preventing crime among their members. The religious community can more easily persist if all members conform to the same norms. So, in addition to secular norms, the religious community imposes moral norms on its members, functions as a sanctioning system, and threatens its members with a terrifying and thus costly after-life in case of delinquency (Hirschi and Stark 1969). Up to now it provides one of the most popular framings for examining associations between criminal offences and religiosity (Baier and Wright 2001).

Even though Hirschi and Stark (1969) came to falsify the hypothesis in their initial study, the idea was so convincing that it was further investigated. C. J. Baier and Wright (2001) conducted a meta-analysis of the association between crime and religiosity. They found support for the hellfire hypothesis and concluded that religiosity has a statistically significant, moderately sized negative effect on crime. Other research has cemented this finding by looking at single measures of delinquency and crime. They have found, for instance, religious attachment to be related to property offences (Adamczyk 2012), violence (Baier 2014) and drug abuse (Salas-Wright et al. 2012). Again other research has treated crime as a uniform construct and has not differentiated between forms of religiosity. Nevertheless, they have often found that religiosity inhibits crime (e.g. Abu-Rayya et al. 2016; Evans et al. 1995). This leads us to expect:

*Individuals who are more religious are less engaged in delinquent behaviour (H1: Hellfire hypothesis).*

However, there is an important argument in favour of refining this hypothesis and treating crime measures separately, which leads us to the second hypothesis. Using data of the US and including different Protestant streams, Burkett and White (1974) extended the hellfire to the *anti-asceticism hypothesis*. They claim that religiosity is a meaningful explanation only for acts that are not also condemned by secular institutions, such as victim-involved crimes (Cochran and Akers 1989). Victimless crimes (e.g. substance use such as Marijuana) form one subclass of a setting where religious norms are more meaningful

(Burkett and White 1974), since secular norms are ambiguous and not always explicitly disapproving (Cochran and Akers 1989). While secular institutions sometimes tolerate substances such as Marijuana (e.g. in the Netherlands), religious organisations step in and condemn substance use through their teachings and the enforcement of social control, which constitute the mechanisms behind the postulated effect of religiosity on victimless crimes. C. J. Baier and Wright (2001) found the effect of religiosity on crime to be significantly stronger when associated with non-violent crimes, which is in line with the anti-asceticism hypothesis. While this research focused on the US exclusively, we will apply it to European data, which include Christians and Muslims. Particularly for Europe, which hosts a significant group of Muslims, the mechanism is interesting to study because Koranic teachings promote an ascetic lifestyle and view the consumption of mind-altering substances critically (e.g. Michalak and Trocki 2006). Thus, religious individuals should adhere to these type of regulations, which implies a steep relationship between substance use and religiosity. We will therefore predict:

*Religiosity lowers the likelihood of drug abuse compared to other forms of delinquency for which religiosity is expected to play no significant role (H2: Anti-asceticism hypothesis).*

Besides the relationship between individual crime and religiosity, we expect religious contexts to play a role in crime and delinquency. The hypothesis on the role of the moral community is the third key hypothesis. Cochran and Akers (1989), building on Stark, Kent, and Doyle (1982; see also Regnerus 2003; Welch, Tittle, and Petee 1991), have focused on the role of the aggregate religiosity within schools. How do classmates affect the individual propensity to commit violent acts? Following the logic of Stark (1996), Pearce and Haynie (2004) who build on Durkheim's (2014 [1897]) extensive work, social control is again the key mechanism. Previous research outlined a direct and a moderator effect of the religious community (interacted with individual religiosity); we focus on the direct effect. In schools where students are on average more religious, the pious students will exercise more social control over the behaviour of their classmates to ensure compliance to moral norms, religious rules and the community, and thereby prevent anomia and deviance. The basic tenet of this hypothesis reads as follows:

*A higher mean level of religiosity in school classes limits delinquent behaviour (H3: Moral community hypothesis).*

## **2.2. Ethno-religious sources of crime**

Previous research has also pointed out that immigrant origin is important in understanding the relationship between crime and religiosity. While religiosity was associated with less violent behaviour among students in Turkey (Kemme and Kolberg 2013), research on Muslim minorities in Germany demonstrated a null effect (Brettfeld and Wetzels 2011; Walburg 2014, 241), but only if a whole range of values (likely to be related to religiosity) were included simultaneously. D. Baier (2014), however, found even a negative relationship. In these studies, religiosity was measured by using the classic items (e.g. frequency of praying, visiting places of worship, subjective/self-rated religiosity); but one study also included measures of fundamentalist beliefs (e.g. seeing one's religion as the only true religion). In this study, immigrant students (Muslim and Christian) were more likely to commit victim-involved violence if they adhered to this item (Brettfeld



and Wetzels 2011). However, most of these studies located the source of a higher level of victim-involved delinquency among minorities (especially in subsequent generations of Muslims) in different norms: in particular masculinity norms combined with high levels of religiosity without necessarily following an abstinent lifestyle (Baier 2014; Windzio and Baier 2007). Individuals who show an abstinent lifestyle in line with certain religious doctrines refrain from drinking alcohol, which can trigger aggressive behaviour as experimental research suggests (Raskin White 2014). D. Baier (2014, 122) therefore concludes 'It is necessary to investigate to what extent these adolescents' profession to their creed is an expression of religious commitment or whether it is, more or less, mere lip-service'.

The roots for this type of delinquent might lie in perceived exclusion. Individuals who perceive themselves or their group to be discriminated against are more likely to become delinquent (see Burt, Simons, and Gibbons 2012). Muslim minorities are more likely to be exposed to exclusion because their group placement is towards the bottom of natives' ethnic hierarchies (Sniderman and Hagendoorn 2007) and they encounter greater difficulties accessing the labour market (König, Maliepaard, and Güveli 2016). This perception of exclusion may then reinforce the 'reactive ethnicity' among minorities (Portes and Rumbaut 2006, 96) - a preservation of different symbolic markers in order to maintain a social identity (in this case a religious identity). This results in a 'vicious cycle' of negative emotions (Agnew and White 1992) and retreatism (Merton 1938). When goals and status cannot be achieved with the means at hand, one way to cope with this problem is to seek other ways (e.g. through delinquency) (Martinez 2017) and reject the majority norms according to the fourth relevant approach - Merton's (1938) general strain theory. Youths of immigrant origin sometimes find themselves in such anomic situations where the (religious) rules that are meant to regulate their lives have lost power. They describe themselves as religious but they have not always practised their religion in a strict way. Thus, the relevant mechanisms explaining their stronger engagement in delinquency lie in perceived exclusion, socio-economic status and victimisation (immigrant children are more exposed to violence; e.g. Windzio and Baier 2007). In response to their subordinated status, minority youths might cope with their situation by developing higher levels of subjective religiosity without necessarily having always observed the rules (i.e. living an abstinent lifestyle), and may circumvent majority norms by engaging in delinquency. We deduce our final hypotheses from the theory on reactive ethnicity and strain theory:

*Individuals who are in a deprived situation or perceive to be discriminated against are more likely to become delinquent (H4: Strain hypothesis). Moreover, we expect highly subjectively religious individuals without an abstinent lifestyle to be more likely to be delinquent (H5: Reactive hedonism hypothesis).*

Previous research (e.g. Baier 2014; Walburg 2014, 199ff.) assumed separate linear effects of religiosity and hedonism/alcohol consumption on delinquency, particularly violence, and did not estimate an overlap of categories/interaction effect or create a typology of believers in multivariate analyses. Jang and Franzen (2013) had a similar idea but limited their analysis to spirituality and crime among non-Muslims in the US. Given the emergence of a new profile of perpetrators, we take this idea a step further and argue that it is not generally religiosity or abstinence, but a combination of these



factors that foster various forms of delinquency. We examine whether the ones who describe themselves as religious but have strongly deviated from an abstinent lifestyle in the past are the ones who are most under threat of delinquency and not the pious ones as such.

### **2.3. Other determinants**

Other research suggests that the study of the relationship between crime and religiosity needs to hold potential confounders constant. Differential association theory, promoted by Sutherland, Cressey, and Luckenbill (1992), also explains the effect of religiosity by socialisation in peer networks where teens learn their peers' beliefs and behaviour (Baier 2014; Pirutinsky 2014, 1291). Recent studies have shown that the composition of friendship networks of Muslims and Christians varies significantly (Leszczensky and Pink 2016). We therefore consider a control of peer influences to be important in the explanation of delinquency.

Following the classical control theoretical approach, the familial network and its resources will be crucial to consider in addition to peers. Particularly in connection with immigrant families, scholars have argued that differences in the parental monitoring can account for ethno-religious differences. There are two ways in which parental monitoring might affect ethno-religious differences in delinquency. First, immigrant families might lack the necessary time and socio-economic resources for parental monitoring resulting in higher levels of delinquency. Second, there is a higher level of social control and more authoritarian parenting in immigrant families resulting in less delinquency (see MacDonald and Saunders 2012 for a review). Including a sample of non-whites, Li (2014) indeed attests to this prevailing role of parental monitoring in delinquency; more religious parents monitor their children to a greater extent and are less likely to have delinquent children.

Lastly, though strongly contested, self-control theory seeks to explain the link between crime and religiosity with a lack of familial control over impulsivity during socialisation, and a limited capacity to anticipate long-term consequences (see also Gottfredson and Hirschi 1990). Reisig, Wolfe, and Pratt (2012) discover criminal offending to be associated with lower self-control and see religiosity as only an intervening variable. Considering these theories helps us to avoid the fallacy of finding a spurious relationship (see also Pratt and Cullen 2000) between crime and religiosity, which in the end could be traced back to general mechanisms as self-control and neurological aspects as seeking arousal or impulsivity (Cochran 2000). Moreover, measures of self-control (but also of personal morality and routine activities) are important explanatory factors for differences between minority and majority group members (see Kroneberg 2018).

While several studies have extensively investigated the relationship between individual crime and religiosity, we attempt to reintroduce the contextual level. In contrast to the aforementioned research, we empirically translate the idea of contextual influences with more sophisticated methods for a wide range of delinquency indicators. Prior research using school data has mostly neglected the multi-level structure of data (Wallace et al. 2007). Moreover, our setting is of crucial relevance for current debates on immigration and integration and shifts the perspective from the US to Europe.

### 3. Data, operationalisation and method

#### 3.1. Data

The German data stem from the *Schulbefragung 2011 – Lebenslagen und Risiken von Jugendlichen* (School survey 2011 – Circumstances and risks among youths) and were collected between in 2011 and 2012 in Cologne and Mannheim. The response rate among schools was 64% in Cologne (30 of 47) and 92% (33 of 36) in Mannheim. Students were in the grades eight to ten. The response rate among students was 80% in Cologne and 76% in Mannheim (Bühlbecker and Wagner 2015; Oberwittler, Schwarzenbach, and Gerstner 2014). Vocational schools were excluded from the analyses, as these were surveyed in Mannheim only. This resulted in 2,820 interviews in Mannheim and 4,128 interviews in Cologne.

The Belgian data ‘Study of opinions and attitudes of young people in Brussels’ were collected in 2007, in secondary schools in seven municipalities, which are representative of the geographic and demographic diversity of Brussels Region. The response rate of schools was 88% and of students 70% (Tenev 2009). Overall, 3,121 questionnaires were filled in by students attending the last year of their compulsory secondary education. Students were on average 18 years old (median).

Both studies follow a multi-stage sampling in which, in a first step, districts representative of the socio-demographic composition of the school population were selected. In the second step, all schools in these districts were sampled. In the third step, a random selection of classes from these schools took place.<sup>2</sup>

We refrain from comparing these two samples directly because the age at the last year of compulsory education in Germany and Belgium differs, but we combine the data for two reasons. First, this helps us to inquire whether findings hold across European cities that have experienced a large influx of immigrants. Second, the Belgian data help us to compensate for shortcomings in the operationalisation of religiosity in the German dataset, which was measured with several items instead of only one, including a measure of religious affiliation and perceived discrimination.

#### 3.2. Operationalisation

Our dependant variable ‘prevalence of delinquency’ is measured by the means of five items in Cologne/Mannheim (Germany) and four in Brussels (Belgium), allowing us to distinguish between vandalism, drug abuse, property offence and victim-involved violence (additionally cyberbullying in Cologne/Mannheim). Our main independent variable is religiosity. We have measures of religious salience/subjective/intrinsic religiosity available, which is one important factor in measuring religion (Cattellino et al. 2014; Evans et al. 1995; Sinha, Cnaan, and Gelles 2007). Measures of intrinsic religiosity have an advantage over external forms of religious behaviour because the latter is subject to social control (Evans et al. 1995, 200). In addition, the German dataset offers us variables to operationalise our typology. We group individuals of different faiths into four types along the dimension of subjective religiosity and abstinence (see Table A1). Among those types are the abstinent areligious, abstinent religious, non-abstinent areligious and the non-abstinent religious (the ones who describe themselves as religious but have strongly deviated from an abstinent lifestyle in the past).

Alternative estimations using interaction effects between subjective religiosity and abstinence produce similar patterns (Table A2 in the appendix).

### 3.3. Method

We estimate three-level (individual in classes in schools) linear probability mixed-effects models for Cologne/Mannheim and two-level linear probability models for Brussels (individuals in schools because information on the class affiliation is not provided)<sup>3</sup> with robust standard errors to account for non-normality in the distribution of our dependent variables. This allows us to compare our coefficients across models (measures of delinquency) and groups (Mood 2010). Logistic regressions lead to similar results with regard to our main independent variables (the only exception is that average religiosity in classes as operationalisation of the moral community hypothesis is linked to less drug abuse in Cologne/Mannheim). We use listwise deletion because the results based on chained imputations ( $m = 10$ ) do not differ for our main variables. In the following descriptive and multivariate analyses, we show separate tables for Cologne/Mannheim and Brussels.

## 4. Results

### 4.1. Descriptive findings for youths in Cologne/Mannheim (Germany) and Brussels (Belgium)

The most frequent form of delinquency in Cologne and Mannheim (Germany) is cyberbullying (Table 1). This form of delinquency has received relatively little attention in earlier research but is expected to gain in importance along with processes of digitalisation. It is more prevalent among minorities compared to majority youths. A noticeable gap between majority and minority exists for victim-involved violence, which is more frequently reported by perpetrators belonging to a minority. Minorities, by contrast, report drug abuse slightly less often (Table 1). For other forms of delinquency, such as vandalism and property offence, the differences between majority and minority youths are not always as clear-cut.

The most frequent form of delinquency among Brussels' youths are drug abuse and property offences (cyberbullying was not measured) (Table 2). For most forms of delinquency, the rates are much lower for minority youths, which becomes particularly visible in case of drug abuse. However, these findings have little explanatory power, and they obscure ethno-religious differences due to socio-demographic factors. We therefore continue with multivariate analyses.

### 4.2. Multivariate analyses

Controlled for socio-demographic variables, victimisation, peer networks, parental monitoring and socio-demographic variables, we observe that religiosity plays a role in delinquency.

We find overall support for our first hypothesis – the *hellfire hypothesis* (H1): religious individuals are less likely to be delinquent (Table 3, Table A3 in the appendix). We find that this is particularly true for vandalism, property offence and drug abuse (Table 3,

**Table 1.** Forms of delinquency in Cologne and Mannheim.

Delinquency Group	Vandalism		Property offence		Drug abuse		Victim-involved violence		Cyber-bullying	
	Majority	Minority	Majority	Minority	Majority	Minority	Majority	Minority	Majority	Minority
Percentage	13.5	13.9	18.5	16.4	13.6	10.6	10.9	17.7	24.9	31.8
<i>n</i> = (100%)	3,386	3,461	3,380	3,461	3,379	3,468	3,374	3,469	3,326	3,388

Source: Compiled by the authors using data from the Survey *Lebenslagen und Risiken von Jugendlichen*.

Note: The table displays percentages.

Models 1–3). Victim-involved violence forms the one important exception in which religious individuals are more likely to be involved (Table 3, Model 4).

In contrast to the *anti-asceticism hypothesis* (H2), we do not notice a substantially steeper slope for drug abuse (Table 3 and Table A3 in the appendix). Sizes of coefficients are similar and do not differ for students whose parents stem from Muslim-majority countries or non-Muslim majority countries (not shown), which could be suspected based on differences in religious observance.<sup>4</sup>

This brings us to community differences. Following Stark's (1996) seminal work in this field, the average level of religiosity in school classes as exogenous indicator of contextual influences cannot curb the prevalence of delinquency. Thus, we must refute the *moral community hypothesis* (H3) in multivariate analyses; on average, classmates that are more religious do not excel or limit the prevalence of delinquency if individual religiosity and type of school are controlled for (Table 4).

However, we do observe some denominational differences; Muslim minorities are overall less likely to become delinquent irrespective of socio-demographic variables, parental monitoring and perceived discrimination (Table 3). Regarding the latter, our findings fit the *strain hypothesis* (H4) according to which we expect individuals of deprived status in terms of perceived discrimination (Table 3), being a victim him/herself and attending the lowest track of school to be more likely to be delinquent (Table 4).

Groups in such a subordinated position are expected to show higher levels of subjective religiosity without always sticking to religious rules and abstinence (H5: *Reactive hedonism hypothesis*). We therefore investigate the inconsistency between belief and behaviour in the next step and thereby extend previous research (e.g. Baier 2014). We identify a group of students who describe themselves as religious but have not always followed an abstinent lifestyle (i.e. experience of binge drinking in the past) to be more likely to be delinquent (Table 4, Models 1–4). In additional analyses of the main denomination in the parents' country of origin in interaction with types of believers, we find that the higher delinquency applies primarily to students who are religious but not abstinent and whose parents originate in Muslim-majority countries (Table 5, Models 1–4).

**Table 2.** Forms of delinquency in Brussels.

Delinquency Group	Vandalism		Property offence		Drug abuse		Victim-involved violence	
	Majority	Minority	Majority	Minority	Majority	Minority	Majority	Minority
Percentage	20.4	15.2	31.2	22.5	40.5	24.2	23.0	23.1
<i>n</i> = (100%)	1,269	1,682	1,271	1,682	1,271	1,679	1,264	1,679

Source: Compiled by the authors using data from the 'Study of opinions and attitudes of young people in Brussels'.

Note: The table displays percentages.

**Table 3.** Linear probability model of delinquency in Brussels.

	(1) Vandalism	(2) Property offence	(3) Drug abuse	(4) Victim-involved violence
Religiosity	-0.017** (0.01)	-0.021* (0.01)	-0.053*** (0.01)	0.016* (0.01)
Atheist (ref.)				
Christian	-0.017 (0.02)	-0.054** (0.02)	-0.071** (0.02)	-0.012 (0.02)
Muslim	-0.046+ (0.03)	-0.166*** (0.03)	-0.166*** (0.03)	-0.087** (0.03)
Other	-0.070* (0.03)	-0.104* (0.05)	0.045 (0.06)	-0.011 (0.04)
<i>Discrimination &amp; parental influence</i>				
Perceived discrimination	0.046*** (0.01)	0.046*** (0.01)	0.029** (0.01)	0.047*** (0.01)
Parental Control	-0.084*** (0.01)	-0.087*** (0.01)	-0.128*** (0.01)	-0.081*** (0.01)
<i>Socio-demographics</i>				
Female (ref. male)	-0.136*** (0.02)	-0.029 (0.02)	-0.073*** (0.02)	-0.191*** (0.02)
Age	-0.011 (0.01)	-0.017+ (0.01)	0.009 (0.01)	0.002 (0.01)
High education (ref.)				
Middle Education	0.030 (0.02)	0.030 (0.03)	0.066** (0.03)	0.104*** (0.02)
Low Education	0.017 (0.02)	0.049 (0.04)	0.106*** (0.03)	0.105** (0.04)
High status (ref.)				
Low Status	-0.058** (0.02)	-0.028 (0.02)	-0.063** (0.02)	-0.012 (0.02)
Middle Status	-0.010 (0.02)	-0.033* (0.02)	-0.016 (0.02)	0.033+ (0.02)
Constant	0.764*** (0.16)	0.957*** (0.18)	0.800*** (0.17)	0.487* (0.19)
Observations	2547	2552	2545	2547
AIC	1908.672	2787.551	2875.081	2465.190

Source: Compiled by the authors using data from the 'Study of opinions and attitudes of young people in Brussels'.  
 Note: Robust standard errors in parentheses, <sup>+</sup> $p < 0.10$ , \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

Our analyses are novel, and they help us to illustrate that our findings are robust across contexts in three ways: First, the role of religiosity holds for different forms of delinquency. Whereas religiosity seems to go along with lower levels of delinquency, we find in Brussels and in the German cities Cologne and Mannheim the opposite for victim-involved violence as religiosity is linked to higher levels of victim-involved violence there. Second, the role of religiosity remains stable using a more fine-grained measure of religiosity. Thus, we can conclude that our simple measure of self-rated religiosity in Cologne/Mannheim is a good predictor for delinquency. Moreover, the Belgian dataset contains information about the religious affiliations. We can unearth an overall lower likelihood of delinquency among Muslim minorities compared to Atheists (Table 3). Third and finally, findings on the role of religiosity do not seem to depend on the city in this case.

#### 4.3. Robustness checks

As the role of religiosity differed depending on whether the dependent variable was prevalence (delinquency yes/no) or incidence (the frequency of delinquent acts) in previous studies, we estimated alternative models using the incidence of delinquency types in the

**Table 4.** Linear probability model of delinquency in Cologne/Mannheim.

	(1)	(2)	(3)	(4)	(5)
	Vandalism	Property offence	Drug abuse	Victim-involved violence	Bullying
<i>Religiosity</i>					
Abstinent religious (ref.)					
Abstinent areligious	0.005 (0.009)	0.007 (0.011)	-0.001 (0.007)	-0.019* (0.009)	0.015 (0.014)
Non-abstinent areligious	0.094*** (0.017)	0.130*** (0.019)	0.224*** (0.017)	-0.012 (0.013)	0.072*** (0.020)
Non-abstinent religious	0.085*** (0.019)	0.064*** (0.019)	0.115*** (0.018)	0.068** (0.023)	0.011 (0.020)
Average class religiosity	-0.006 (0.012)	0.004 (0.010)	-0.012 (0.010)	0.007 (0.011)	0.012 (0.014)
<i>Parental influence &amp; personality</i>					
Parental monitoring	-0.019* (0.008)	-0.029*** (0.007)	-0.006 (0.005)	-0.011 (0.007)	-0.021* (0.009)
Parental beating	0.028*** (0.009)	0.028** (0.009)	0.008 (0.007)	0.011 (0.008)	0.015 (0.011)
Self-control	0.083*** (0.008)	0.052*** (0.008)	0.033*** (0.007)	0.075*** (0.009)	0.084*** (0.007)
<i>Peers</i>					
Friends vandalise	0.206*** (0.012)				
Friends steal		0.302*** (0.014)			
Friends do drugs			0.298*** (0.013)		
Victim of violence				0.156*** (0.018)	
Friends violent				0.272*** (0.016)	
Victim of bullying					0.312*** (0.013)
Friends are bullies					0.321*** (0.014)
<i>Socio-demographics</i>					
Female (ref. male)	-0.035*** (0.009)	0.001 (0.008)	-0.018* (0.007)	-0.087*** (0.010)	-0.027* (0.012)
Age	-0.007 (0.005)	0.004 (0.005)	0.011** (0.004)	-0.005 (0.004)	-0.007 (0.004)
Cologne	0.009 (0.009)	0.026* (0.010)	0.016* (0.007)	0.002 (0.009)	0.012 (0.010)
<i>Parental education</i>					
no degree (ref.)					
Lower sec. school I, no access to general education	0.002 (0.023)	-0.012 (0.022)	-0.005 (0.015)	-0.003 (0.025)	-0.044 (0.027)
Lower sec. school II, access to general education	0.005 (0.022)	0.007 (0.026)	-0.003 (0.015)	0.017 (0.026)	-0.014 (0.028)
Upper sec. school	-0.005 (0.027)	0.011 (0.024)	0.015 (0.016)	-0.005 (0.026)	-0.044 (0.029)
University	-0.014 (0.026)	-0.010 (0.024)	0.019 (0.014)	-0.010 (0.026)	-0.043 (0.030)
<i>Students' school type</i>					
Upper secondary school (Gymnasium) (ref.)					
Comprehensive school	-0.011 (0.021)	0.009 (0.019)	0.008 (0.014)	-0.020 (0.024)	0.044* (0.020)
Lower secondary school II (Realschule)	0.002 (0.012)	-0.003 (0.014)	0.012 (0.012)	-0.006 (0.013)	0.025* (0.013)
Lower secondary school I (Hauptschule)	0.007 (0.018)	0.046** (0.018)	0.005 (0.014)	0.036* (0.017)	0.010 (0.020)
	0.018+	0.026*	-0.012	-0.022*	0.019+

(Continued)

**Table 4.** Continued.

	(1) Vandalism	(2) Property offence	(3) Drug abuse	(4) Victim-involved violence	(5) Bullying
Lower secondary school (Haupt-/ Realschule)	(0.011)	(0.010)	(0.008)	(0.009)	(0.011)
Waldorf school	-0.047*** (0.011)	-0.025* (0.011)	-0.001 (0.009)	0.019+ (0.011)	0.001 (0.010)
<i>Ethnic origin</i>					
German (ref.)					
Turkish	0.007 (0.015)	-0.055*** (0.014)	0.005 (0.011)	0.036** (0.013)	0.050** (0.018)
South European	-0.003 (0.024)	0.011 (0.024)	0.013 (0.020)	-0.009 (0.021)	0.052* (0.026)
Russian/ex-Soviet	-0.035+ (0.020)	0.016 (0.034)	-0.044** (0.014)	-0.003 (0.028)	0.060* (0.030)
Ex-Yugoslav/Albanian	-0.020 (0.021)	0.036 (0.030)	-0.010 (0.016)	0.048+ (0.028)	0.041 (0.032)
Polish	-0.001 (0.025)	-0.023 (0.026)	0.007 (0.023)	-0.025 (0.021)	0.017 (0.027)
Eastern European (other)	0.017 (0.029)	-0.008 (0.038)	-0.035 (0.024)	-0.067* (0.034)	0.016 (0.032)
Arab/North African/Islamic Asian	-0.039+ (0.021)	-0.056* (0.025)	0.000 (0.020)	0.010 (0.021)	0.012 (0.023)
Sub-Saharan African	-0.028 (0.037)	-0.003 (0.044)	-0.032 (0.031)	0.037 (0.035)	0.033 (0.042)
other ethnicity	-0.014 (0.044)	-0.041 (0.046)	-0.070* (0.029)	0.024 (0.051)	0.038 (0.062)
Central/East Asian	-0.009 (0.042)	-0.015 (0.048)	0.005 (0.029)	0.011 (0.037)	0.012 (0.044)
Latin American	0.013 (0.056)	0.096+ (0.056)	0.129* (0.058)	0.028 (0.059)	0.015 (0.046)
Western European/North American/ Australian	0.044 (0.031)	0.076** (0.025)	0.039 (0.027)	0.019 (0.023)	0.024 (0.036)
Constant	0.002 (0.102)	-0.104 (0.087)	-0.220** (0.072)	0.011 (0.079)	-0.003 (0.104)
Observations	5304	5298	5293	5236	5147
AIC	2497.978	3195.052	792.433	1932.190	4302.733

Source: Compiled by the authors using data from the Survey *Lebenslagen und R. von Jugendlichen*.

Note: Robust standard errors in parentheses, + $p < 0.10$ , \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

past twelve months as our dependent variables. Since these variables are heavily skewed, we estimated two-level mixed-effects negative binomial regressions. In the data from Cologne and Mannheim, students are nested in classes and in the data from Brussels, students are nested in schools because class affiliation was not assessed. The results for our main independent variables remain stable (Tables A4 and A5 in the appendix). In addition, we reveal that the moral community hypothesis applies to the case of incidence. If the average level of religiosity increases in German classes by one unit, the likelihood of delinquent acts decreases (Table A4 in the appendix). Thus, we can conclude that classes with a higher average level of religiosity do not prevent the occurrence of delinquency but they might keep the incidences within limits.<sup>5</sup>

Moreover, our approach of combining subjective religiosity and abstinence also triggers the question of whether subjective religiosity or abstinence are more important. We observe that religiosity is of varying importance for delinquency. In terms of effect size, abstinence is more important in the explanation of vandalism, property offence and drug abuse but the beta coefficients are of nearly equal size with regard to victim-involved violence and bullying (see Table A3 in the appendix), which suggests that it is indeed a



**Table 5.** Delinquency and Religiosity depending on country of origin (Cologne/ Mannheim).

	(1) Vandalism	(2) Property offence	(3) Drug abuse	(4) Victim-involved violence	(5) Bullying
<i>(partly) Muslim-majority country</i>					
Abstinent religious (ref.)					
Abstinent areligious	0.043+ (0.022)	0.054* (0.022)	-0.003 (0.014)	-0.031* (0.016)	0.023 (0.030)
Non-abstinent areligious	0.118** (0.039)	0.198*** (0.054)	0.213*** (0.038)	0.019 (0.037)	0.022 (0.046)
Non-abstinent religious	0.131*** (0.029)	0.075** (0.028)	0.126*** (0.028)	0.126*** (0.032)	-0.002 (0.027)
<i>non-Muslim country</i>					
Abstinent religious	0.039** (0.015)	0.069*** (0.013)	0.007 (0.007)	-0.018 (0.014)	-0.035* (0.017)
Abstinent areligious	-0.058* (0.025)	-0.060* (0.024)	-0.000 (0.015)	0.008 (0.019)	-0.010 (0.034)
Non-abstinent areligious	-0.042 (0.043)	-0.082 (0.060)	0.011 (0.041)	-0.041 (0.039)	0.053 (0.049)
Non-abstinent religious	-0.087* (0.040)	-0.016 (0.038)	-0.020 (0.037)	-0.097** (0.031)	0.022 (0.035)
Constant	-0.032 (0.106)	-0.167+ (0.089)	-0.223** (0.073)	0.032 (0.081)	0.025 (0.105)
Observations	5304	5298	5293	5236	5147
AIC	2484.595	3198.543	803.295	1911.344	4294.431

Source: Compiled by the authors using data from the Survey *Lebenslagen und R. von Jugendlichen*. Note: Robust standard errors in parentheses, <sup>+</sup> $p < 0.10$ , \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

combination of belief and practice for this type of delinquency. However, we would like to emphasise that our estimates are conservative due to an inclusion of several control variables (e.g. perceived discrimination, parental control) that might differ across religious and non-religious youths. Yet, coefficients for religiosity do not change noticeably if we exclude the variables mentioned above (not shown).

#### 4.4. Delinquency and socio-demographic influences

In addition to religion, we estimated ethnic differences. Although ethnic minorities are less likely to be delinquent in most instances, there are exceptions – most prominently in bullying and to some extent in victim-involved violence (Table 4). Previous research has already shown that minorities of deprived background are more likely to be bullies (e.g. Sykes, Piquero, and Gioviano 2016). Holding the demographic variables and religious types constant, North African and Arab youths are no more likely than majority youths to be delinquent, and they are less likely to be involved in vandalism and property offences (Table 4).

Our findings are robust to influences of socio-economic status. Parental education does not significantly explain delinquency.<sup>6</sup> Variation across school types is also not systematic but we see a tendency of students attending lower secondary schools to be more likely to commit property offence and victim-involved violence (Table 4, Model 2 and 4). In additional analyses (available upon request), we also included a control for parental unemployment and living on social benefits (this was excluded in the main analyses due to a dropping sample size). Although parental unemployment and living on social benefits influenced students' likelihood of committing property offence and victim-involved violence significantly, it did not explain drug abuse, vandalism and bullying, or alter our

core variables. The number of siblings and parental separation were mostly not of significance. They also did not alter the results for our main variables.

Besides socio-economic differences, we observe gender differences. Girls are nearly always less likely to be delinquent (except in terms of property offence in Brussels, Table 3). In an additional analyses, we interacted gender with our main variables of interest (available on request). While the relationship between religiosity and delinquency is not different for boys and girls in Brussels (except for vandalism where the association with religiosity is close to zero for girls), we see that the patterns observed for Cologne/Mannheim hold for boys but not for girls. This is most visible in case of victim-involved violence. No matter of which type (religious and/or abstinent), girls are almost always less violent than abstinent religious boys (except for abstinent areligious girls). Non-abstinent religious girls are also less likely to vandalise, which is the opposite of boys. Given previous research on gender differences and the role of masculinity norms (Baier 2014; Windzio and Baier 2007), these findings do not come as a surprise.

## 5. Conclusion

This paper set out to scrutinise the relationship between delinquency and religiosity among European youths. Our analyses generate an interesting insight into the study of delinquency and the role of religiosity. They demonstrate that we need to refine the *hellfire hypothesis*, which is reflected in a reduced delinquency due to the fear of hell. We also need to go beyond Burkett's and White's (1974) extension of the *hellfire-hypothesis* to the *anti-asceticism hypothesis*, stating a stronger relationship between substance use and religiosity. In fact, the role of subjective religiosity in delinquency is trumped by the behavioural indicator of religiosity – abstinence – in case of vandalism, property offence and drug abuse, while it can play an equal role in explaining victim-involved violence and bullying. This is surprising and speaks against the anti-asceticism hypothesis.

We refine previous research by unearthing how subjective religiosity intertwined with abstinence from binge drinking relates to delinquency. We distinguish the empirically often-overlooked types of religious individuals: (I.) abstinent non-believers, (II.) abstinent believers, (III.) non-abstinent non-believers and (IV.) non-abstinent believers. We are able to show that believers who do not abstain from binge drinking are more likely to be delinquent than the pious, which is in line with our *reactive hedonism hypothesis*. This pattern is more pronounced among youths whose parents stem from Muslim-majority countries. Yet, this does not warrant the conclusion that Muslim minorities are more likely to be delinquent. Overall, they are less likely to be delinquent. Primarily a group that identifies with a religion but does not necessarily follow certain rules of that religion (perhaps out of an urge to compensate for their lifestyle) is more likely to be delinquent. We also discuss explanations based on other measures of strain. Our findings suggest that a feeling of discrimination and attendance of the lowest tracks in schools are characteristic for delinquent youths. We expected those who are most vulnerable in terms of low social status, victimisation and exclusion to be more likely to be delinquent in order to achieve status with alternative means (*strain hypothesis*).

The *moral community* operationalised through the average level of religiosity in classes might have a protective function as the incidences (frequency) of delinquency are lower in more religious classes but it does not alter the prevalence (being delinquent or not).

Although we were able to draw on various measures of delinquency there is room for improvement. Ideally, we would have had a greater set of indicators of religiosity available, in particular of religious abstinence and observance. Yet a larger number of other items would be at the expense of a wide set of delinquency measures. Future research should also try to disentangle religiosity from spirituality. In addition, social desirability in the reporting of delinquent acts always attracts potential criticism. However, this does not overshadow our findings for three reasons: First, our interest lies not in drawing conclusions about the distribution of delinquency, but only in investigating relationships. Second, it has been shown that the student responses were more honest when data were collected in classes rather than at home. Third, police records do not necessarily provide a better alternative because some delinquent acts stay undiscovered and would leave these underestimated in official statistics (Köllisch and Oberwittler 2004; Wikström et al. 2013). Finally, an important limitation concerns the question of causality. Data collected over the life-course would be helpful in determining the pathways into delinquency. Previous research has shown a plurality of pathways into delinquency. While for some non-abstinence is an expression of a general difficulty with the observation of rules and self-control, for others it triggers aggression (Raskin White 2014). Similarly, life-course data would be desirable to observe reactive religiosity. In any case, the results plead for conditional views on the relationship between delinquency and religiosity to illuminate the heterogeneity within the group of delinquents.

Despite any potential shortcomings, the merits of this study lie in the comparatively large dataset, the simultaneous investigation of a vast range of delinquency indicators and their cross-context validation including two hotspots with a recent crime history. We thereby refine valuable previous research, which concluded that religion, in particular Islam, can be linked to higher levels of violence (e.g. Baier 2014). We reveal that ‘trouble-makers’ from Muslim-majority countries are not religious in the proper sense. Instead, some have binge drinking experience. Thus, it is not primarily about religion, immigrant origin or abstinence alone but a combination of these attributes (heterogeneity within the group of abstinent and religious). In relative terms, the group of violent youths to which these attributes apply is negligible, which should also be kept in mind discussing the events of New Year’s Eve. Moreover, violence can also target in-group members (Wittek, Kroneberg and Lämmermann 2019). Nevertheless, past terrorist incidents have taught us that the retreat into communities with competing moral orders and hate preaching are a harbour for particularly the subjectively religious and previously non-abstinent violent youths. Our study should warrant our understanding of delinquency in immigrant and native communities.

It also contributes to the current debate on the relationship between integration and religion, which condemns religion either as a barrier or praises it as a bridge to integration (see Kogan, Fong, and Reitz 2019). In Europe, religion has been revealed a barrier to social and cultural integration (e.g. Carol 2016) as well as structural integration (e.g. Khoudja and Fleischmann 2015) but as a bridge to political engagement (e.g. Teney and Hanquinet 2012). Our results reveal the complexity of this relationship, pointing out the need to move away from linear predictions to typology-based approaches, which do not lump religious individuals in one category. There is no uniform relationship with religiosity in the field of delinquency, which would allow us to conclude that religion is a barrier or bridge per se.

## Notes

1. <https://www.mannheim.de/de/stadt-gestalten/daten-und-fakten/bevoelkerung/einwohner-mit-migrationshintergrund>, 09.05.2018.
2. Access to the datasets were available on request from Michael Wagner (University of Cologne) and Céline Teney (University of Göttingen).
3. Overall, the variation on the levels of classes and schools differs strongly by type of delinquency. While the variation on the class and school level is in logistic mixed-effects models altogether below 10% in case of vandalism, property offence and about 5% in case of bullying, 18% lie on the class level in case of drug abuse (6% on the school level) and 13% on the school level in case of violence (3% on the class level). We decided to cluster because the assumption that errors are fully uncorrelated is violated. Second, this is recommended if some clusters in the population are not covered due to a clustered sampling strategy.
4. In the Belgian data, the coefficients for Catholic and Muslim students are not significantly different from each other. The only exception is the relationship with drug abuse, which is more negative for Catholics.
5. Our findings on incidences of delinquency remain relatively stable if we exclude students who have been delinquent at some point in the past but do not indicate any acts in the past twelve months and are more likely to be a group of students where the causality between religiosity and delinquency is reversed, i.e. they have become more religious to seek forgiveness for their 'sinful' behaviour in the past.
6. The simultaneous inclusion of parental education and students' school type does not affect the findings.

## Acknowledgements

We gratefully acknowledge Céline Teney and the Université libre de Bruxelles for the provision of the Belgian data. We would also like to thank Mark Wittek for the data preparation, Clemens Kroeber and associated members of the chair of Sociology I (University of Cologne) for helpful comments on a previous draft of this paper.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Appendix

**Table A1.** Operationalisation.

Cologne and Mannheim (Germany)				
Variables	Items	Scale	Mean (SD)/%	n
<i>Dependent variables</i>				
	Most people, at some point in their life, sometimes do things which are prohibited, for example ride the bus without having a ticket or stealing something. Have you already done anything forbidden?	0 (no), 1 (yes)		
Vandalism	'... deliberately destroyed something in school, parks, telephone boxes, metro'.		14%	943
Property offences	'... stole something in a shop'.		17%	1,199
Drug abuse	'... took drugs (marihuana, ecstasy etc.)'.		12%	831
Victim-involved violence	'... hit someone until he/she was injured or bleeding'.		14%	989
Cyberbullying	... insulted someone on the internet' (e.g. with pictures / videos / comments, on SchülerVZ [similar to facebook] etc.).		28%	1,918
<i>Independent variables</i>				
Abstinent religiosity	Combination of the items 'What meaning does religion have in your life?' (recoded to 'not important'/'important') and 'Did you ever drink so much alcohol that you were really drunk?' (recoded to 'never'/'once or more')	0 (Abstinent areligious) 1 (Abstinent religious) 2 (Non-abstinent areligious) 3 (Non-abstinent religious)	34% 38% 19% 10%	2,285 2,561 1,261 698
Average level religiosity in class		Average level of religiosity in class; aggregated from survey (minus respondent)	2.5 (.5)	6,948
Parental monitoring	'How well are your parents informed about your leisure time?' 'My parents know with whom I spend my leisure time and where we are', '... know what I do in my leisure time', '... know my friends well'.	1 (never), 2 (sometimes), 3 (frequently), 4 (almost always)	3.1 (.8)	6,832
Victim experience	'It happens that my mother/ my father beats me or throws something at me'.  • 'Have you ever been a victim of a violent assault?' • 'Somebody beat me up that violently that I got hurt or was bleeding' • 'Somebody insulted me online (e.g. by photos/videos/comments on SchülerVZ etc.)'	Mean of maternal and paternal value, 1 (not at all correct)–4 (correct)  0 (no), 1 (yes)	1.3 (.6)  10% 21%	6,796  717 1,430
Age			15.0 (1.1)	6,869
City		0 (Mannheim), 1 (Cologne)	41% 59%	2,820 4,128

(Continued)

**Table A1.** Continued

Variables	Item	Answer	Mean (SD)/%	n
Self-control	<ul style="list-style-type: none"> <li>• 'I lose self-control rather quickly'., 'Sometimes I take risks just for fun'.</li> <li>• 'If I am really angry others should better keep away from me'.</li> <li>• 'Excitement and adventure are more important to me than security'.</li> <li>• 'I often act spontaneously without consideration'.</li> </ul>	1 (not at all correct)-4 (correct), alpha scores	2.3 (.7)	6,900
Peer delinquency	How many of your friends have done the following things? <ul style="list-style-type: none"> <li>• 'deliberately destroyed something in school, parks, telephone boxes, metro'.</li> <li>• 'stole something in a shop'.</li> <li>• 'took drugs (marihuana, ecstasy etc.)'.</li> <li>• 'hit someone until he/she was injured or bleeding'.</li> <li>• 'insulted someone on the internet' (e.g. with pictures/videos/comments on SchülerVZ [similar to facebook] etc.)</li> </ul>	0 (none/unknown), 1 (>=1)		
			39%	2,661
			34%	2,314
			26%	1,817
			25%	1,746
			47%	3,207
Parents' education	'What is the highest educational level of your parents?'	1 (no degree),	4.0%	239
		2 (lower secondary education I),	14%	802
		3 (lower secondary education II),	26%	1,456
		4 (university-entrance diploma),	25%	1,431
		5 (graduate degree)	30%	1,696
Gender	'Please specify your sex: I am a ...'	0 (boy)	48%	3,331
		1 (girl)	52%	3,616
Ethnic background	place of birth of the parents (if both parents have a different background, the mother's place of birth was prioritised)	German,	49%	3,411
		Turkish,	20%	1,415
		South European,	4%	309
		Russian/ex-Soviet,	4%	262
		ex-Yugoslav/Albanian,	3%	238
		Polish,	4%	266
		other Eastern European,	1%	102
		Arab/North African/Isl.	5%	315
		Asian,	2%	136
		Sub-Saharan African,	2%	118
		Central/East Asian,	1%	65
		Latin American,	3%	225
		West European/US/CA/AU,	1%	59
		other		
School type		1 (Upper secondary school)	48%	3,334
		2 (Comprehensive school)	9%	611
		3 (Lower secondary school II)	23%	1,621
		4 (Lower secondary school I)	17%	1,183
		5 (Lower secondary school)	2%	167
		6 (Waldorf school)	<1%	32

(Continued)

**Table A1.** Continued

Brussels (Belgium)			Mean	
Variables	Item	Answer	(SD)/%	n
<i>Dependent variables</i>	Most people have committed minor offences thorough their life, how many of the following have you committed in the past year?	0 (never), 1 (yes, once in a while and more)		
Vandalism	Property offences (tag, engrave, set a bin on fire)		17%	515
Property offences	Theft in a shop		26%	775
Drug abuse	Consume soft drugs (e.g. marijuana, joint, cannabis)		31%	921
Victim-involved violence	Physical aggression (grappling)		23%	678
<i>Independent variables</i>				
Religiosity	<ul style="list-style-type: none"> <li>• 'Do you have things in common with people who belong to the same religion as you?'</li> <li>• 'Do you consider yourself as religious?'</li> <li>• 'How often do you attend religious services?'</li> </ul>	1 (nothing in common) – 5 (a lot in common), 1 (not believing) – 5 (very religious), 1 (never) – 7 (everyday), factor scores	2.0 (1.4)	2,846
Religious affiliation		Atheist, Christian, Muslim, other	31%, 38%, 28%, 3%	917 1,130 827 100
Parental monitoring	parent knows what the child does after school, where he/she goes out, how the pocket money is spent, what he/she does in leisure time, which friends he/she has, and whether parents know about their child's school notes	Row mean, 1 (never) to 5 (always)	3.8 (.8)	2,987
Perceived discrimination	In the past year, how many times were you treated unequally or discriminated against in your school?	1 (never), 2 (less often), 3 (at least once a month), 4 (at least once a week) 5 (daily)	1.5 (1.0)	2,954
Parents' socio-economic status		low, middle, high	18%, 38%, 45%	493 1,065 1,254
Gender		0 (boy), 1 (girl)	43%, 57%	1,282 1,724
School type		Vocational (low), technical (middle), general (high)	12%, 31%, 57%	368 947 1,712

Source: Compiled by the authors using data from the Survey *Lebenslagen und Risiken von Jugendlichen* and 'Study of opinions and attitudes of young people in Brussels'.

**Table A2.** Interaction between religiosity and abstinence (Cologne/Mannheim).

	(1) Vandalism	(2) Property offence	(3) Drug abuse	(4) Victim-involved violence	(5) Bullying
<i>Religiosity</i>					
Less religious (ref. more religious)	0.005 (0.009)	0.007 (0.011)	-0.001 (0.007)	-0.019* (0.009)	0.015 (0.014)
Non-abstinent (ref. abstinent)	0.085*** (0.019)	0.064*** (0.019)	0.115*** (0.018)	0.068** (0.023)	0.011 (0.020)
Less religious # Non-abstinent	0.005 (0.022)	0.059* (0.025)	0.110*** (0.022)	-0.062* (0.024)	0.045* (0.021)
Average class religiosity	-0.006 (0.012)	0.004 (0.010)	-0.012 (0.010)	0.007 (0.011)	0.012 (0.014)
Constant	0.002 (0.102)	-0.104 (0.087)	-0.220** (0.072)	0.011 (0.079)	-0.003 (0.104)
Observations	5304	5298	5293	5236	5147
AIC	2497.978	3195.052	794.433	1932.190	4302.733

Source: Compiled by the authors, using data from the Survey *Lebenslagen und Risiken von Jugendlichen*.  
 Note: Robust standard errors in parentheses, all controls from Table 4, +*p* < 0.10, \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001.

**Table A3.** Delinquency and main effects of religiosity (Cologne/Mannheim).

	(1) Vandalism	(2) Property offence	(3) Drug abuse	(4) Victim-involved violence	(5) Bullying
Religiosity	-0.008 (0.005)	-0.050** (0.006)	-0.052*** (0.004)	0.056*** (0.005)	-0.047*** (0.006)
Non-abstinence	0.167*** (0.006)	0.149*** (0.007)	0.374*** (0.006)	0.077*** (0.005)	0.041** (0.007)
Average class religiosity	-0.003 (0.012)	0.012 (0.010)	-0.007 (0.010)	0.010 (0.011)	0.018 (0.014)
Observations	5304	5298	5293	5236	5147
AIC	2426.794	3149.047	386.776	1921.807	4296.770

Source: Compiled by the authors, using data from the Survey *Lebenslagen und Risiken von Jugendlichen*.  
 Note: Robust standard errors in parentheses, beta coefficients, all controls from Table 4, +*p* < 0.10, \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001.

**Table A4.** Mixed-effects negative binomial regression model of delinquency types in Cologne/Mannheim (incidence).

	(1) Vandalism	(2) Property offence	(3) Drug abuse	(4) Victim-involved violence	(5) Bullying
<i>Religiosity</i>					
Abstinent religious (ref.)					
Abstinent areligious	-0.066 (0.166)	0.035 (0.164)	-0.376 (0.292)	-0.058 (0.156)	0.305** (0.115)
Non-abstinent areligious	0.392* (0.163)	0.915*** (0.157)	1.744*** (0.256)	0.461** (0.154)	0.768*** (0.123)
Non-abstinent religious	0.245 (0.164)	0.606*** (0.177)	0.832** (0.268)	0.481*** (0.142)	0.252+ (0.134)
Average class religiosity	-0.390** (0.146)	-0.135 (0.167)	-0.774** (0.236)	-0.204+ (0.122)	-0.288* (0.128)
<i>Parental influence &amp; personality</i>					
Parental monitoring	-0.339*** (0.069)	-0.291*** (0.071)	-0.036 (0.094)	-0.138* (0.062)	-0.117* (0.054)
Parental beating	0.115 (0.074)	0.179* (0.078)	0.291** (0.101)	0.225*** (0.065)	0.152* (0.060)
Self-control	0.730***	0.268**	0.523***	0.524***	0.563***

(Continued)

**Table A4.** Continued.

	(1)	(2)	(3)	(4)	(5)
	Vandalism	Property offence	Drug abuse	Victim-involved violence	Bullying
	(0.088)	(0.085)	(0.111)	(0.076)	(0.067)
<i>Peers</i>					
Friends vandalise	1.589*** (0.138)				
Friends steal		1.833*** (0.122)			
Friends do drugs			3.577*** (0.194)		
Victim of violence				0.332** (0.110)	
Friends violent				1.369*** (0.111)	
Victim of bullying					0.760*** (0.080)
Friends are bullies					1.186*** (0.096)
<i>Socio-demographics</i>					
Female (ref. male)	-0.470*** (0.111)	-0.314** (0.107)	-0.735*** (0.142)	-0.865*** (0.109)	-0.445*** (0.081)
Age	-0.034 (0.058)	0.060 (0.060)	0.187* (0.077)	-0.049 (0.049)	-0.007 (0.047)
Cologne	0.138 (0.134)	-0.044 (0.149)	-0.015 (0.209)	0.218+ (0.114)	0.075 (0.119)
<i>Parental education</i>					
no degree (ref.)					
Lower sec. school I, no access to general education	-0.323 (0.283)	-0.222 (0.309)	0.217 (0.456)	-0.014 (0.221)	-0.331 (0.207)
Lower sec. school II, access to general education	-0.265 (0.273)	0.092 (0.295)	-0.125 (0.448)	0.055 (0.209)	-0.292 (0.200)
Upper sec. school	-0.151 (0.280)	0.374 (0.298)	0.022 (0.456)	-0.069 (0.220)	-0.186 (0.205)
University	-0.297 (0.283)	0.179 (0.301)	0.504 (0.444)	-0.063 (0.225)	-0.350+ (0.208)
<i>Students' school type</i>					
Upper secondary school (Gymnasium) (ref.)					
Comprehensive school	0.358 (0.245)	0.231 (0.278)	0.205 (0.381)	0.105 (0.205)	0.512* (0.212)
Lower secondary school II (Realschule)	0.083 (0.167)	0.125 (0.187)	0.495+ (0.254)	0.049 (0.149)	0.322* (0.150)
Lower secondary school I (Hauptschule)	0.091 (0.201)	0.404+ (0.225)	0.490 (0.332)	0.278 (0.169)	-0.103 (0.187)
Lower secondary school (Haupt-/Realschule)	0.236 (0.390)	0.531 (0.442)	0.228 (0.640)	0.138 (0.329)	-0.151 (0.377)
Waldorf school	-0.086 (0.811)	0.485 (0.992)	-0.663 (1.067)	-1.028 (0.845)	1.358* (0.682)
<i>Ethnicity</i>					
German (ref.)					
Turkish	0.060 (0.164)	-0.127 (0.181)	0.153 (0.252)	0.524*** (0.144)	0.710*** (0.126)
South European	0.163 (0.249)	0.487* (0.238)	0.411 (0.329)	0.116 (0.235)	0.632*** (0.180)
Russian/ex-Soviet	-0.103 (0.282)	0.046 (0.256)	-0.506 (0.389)	-0.018 (0.258)	0.481* (0.209)
Ex-Yugoslav/Albanian	-0.255 (0.304)	0.339 (0.270)	-0.918* (0.439)	0.307 (0.236)	0.704*** (0.207)
Polish	0.396 (0.259)	0.406 (0.286)	0.802* (0.389)	0.125 (0.265)	0.104 (0.215)
Eastern European (other)	-0.019	-0.892*	-0.665	-0.512	0.068

(Continued)

**Table A4.** Continued.

	(1) Vandalism	(2) Property offence	(3) Drug abuse	(4) Victim-involved violence	(5) Bullying
Arab/North African/Islamic Asian	(0.420) -0.124 (0.275)	(0.357) 0.176 (0.300)	(0.498) -0.029 (0.380)	(0.434) -0.086 (0.241)	(0.321) 0.617** (0.200)
Sub-Saharan African	0.232 (0.411)	0.165 (0.335)	-0.939+ (0.513)	0.405 (0.306)	-0.308 (0.333)
Central/East Asian	-0.571 (0.541)	-0.450 (0.422)	0.412 (0.535)	0.326 (0.378)	-0.028 (0.355)
Latin American	0.261 (0.410)	-0.322 (0.378)	0.601 (0.445)	-2.051** (0.713)	0.876* (0.440)
Western European/North American/ Australian other ethnicity	0.545* (0.254) 0.193 (0.541)	0.232 (0.237) -0.471 (0.619)	0.207 (0.301) -0.451 (1.106)	0.240 (0.251) 0.694+ (0.402)	0.168 (0.220) 1.852*** (0.437)
Constant	-1.453 (1.067)	-2.448* (1.088)	-5.914*** (1.388)	-1.999* (0.830)	-1.244 (0.833)
Observations	1505	1618	1350	1388	1814
AIC	3954.430	4926.633	4634.596	3450.236	7749.944

Source: Compiled by the authors, using data from the Survey *Lebenslagen und Risiken von Jugendlichen*.  
 Note: Two-level (individuals in classes) mixed-effects negative binomial regression, +  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table A5.** Mixed-effects negative binomial regression model of delinquency types in Brussels (incidence).

	(1) Vandalism	(2) Property offence	(3) Drug abuse	(4) Victim-involved violence
Religiosity	-0.146* (0.06)	-0.110* (0.05)	-0.257*** (0.04)	0.089* (0.04)
Atheist (ref.)				
Christian	0.013 (0.14)	-0.203+ (0.11)	-0.195+ (0.10)	-0.041 (0.11)
Muslim	-0.425+ (0.23)	-0.926*** (0.18)	-0.833*** (0.16)	-0.504** (0.17)
Other	-0.679+ (0.37)	-0.257 (0.25)	0.258 (0.23)	-0.115 (0.26)
<i>Discrimination &amp; parental influence</i>				
Perceived discrimination	0.307*** (0.05)	0.278*** (0.04)	0.141*** (0.04)	0.215*** (0.04)
Parental Control	-0.626*** (0.07)	-0.454*** (0.06)	-0.534*** (0.06)	-0.389*** (0.06)
<i>Socio-demographics</i>				
Female	-0.950*** (0.11)	-0.221* (0.09)	-0.386*** (0.08)	-1.096*** (0.09)
Age	-0.037 (0.06)	-0.085* (0.04)	0.039 (0.04)	0.034 (0.04)
High Education (ref.)				
Middle Education	0.178 (0.14)	0.141 (0.11)	0.260* (0.11)	0.511*** (0.10)
Low Education	0.226 (0.21)	0.322+ (0.16)	0.421* (0.16)	0.584*** (0.15)
High Status (ref.)				
Low Status	-0.359+ (0.19)	-0.190 (0.15)	-0.302* (0.15)	0.133 (0.14)
Middle Status	-0.136 (0.12)	-0.137 (0.09)	-0.104 (0.09)	0.192+ (0.10)
Constant	2.044+ (1.06)	2.478** (0.82)	1.635* (0.81)	-0.421 (0.81)
Observations	2547	2552	2545	2547
AIC	3200.593	4211.060	5909.748	3755.601

Source: Compiled by the authors, using data from the 'Study of opinions and attitudes of young people in Brussels'.  
 Note: Two-level (individuals in schools) mixed-effects negative binomial regression, +  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .