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Criminal careers: A longitudinal comparison of male adolescent offenders of native Dutch and Moroccan origin in The Netherlands.

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Abstract

The current study elaborates on a former study by Veen and colleagues (2011), using extended data and a two-year follow up period. Criminal careers of 288 male adolescent offenders of native Dutch and Moroccan origin were compared using criminal record data. Using latent class analysis, a five-class model was found of offender types; violent offenders, property offenders, property/minor violent offender, violent offenders/arsonists, and sexual offenders. Category of first registered offence held predictive value of future offender type membership. Native Dutch and Moroccan male adolescent offenders differed significantly from each other based on categories of offences committed, number of offences committed and offender type membership. Moroccan male adolescent offenders showed a higher number of registered offences and a strong overrepresentation in violent and nonviolent property offences compared to native Dutch offenders. Overall, it can be concluded that male adolescent offenders of native Dutch and Moroccan origin represent significantly different offender types. These differences could only partially be accounted for by SES.

Keywords: male adolescent offenders, criminal records, offending behavior, ethnic background, longitudinal data

Criminal careers: A longitudinal comparison of male adolescent offenders of native Dutch and Moroccan origin in The Netherlands

The current study elaborates on a former study comparing male adolescent offenders of native Dutch and Moroccan origin in the Netherlands (see Veen, Stevens, Doreleijers, & Vollebergh, 2011). Four different types of youth offenders were found based on analyses of criminal records; property offenders, violent offenders, arsonist and sex offenders. Offenders of Moroccan origin were overrepresented in property offences, both violent and non violent, while offenders of native Dutch origin showed a slight overrepresentation in the more serious offences, such as violent offences, sex offences and arson. The former study will be replicated and extended with a follow up period of two years using additional data from an official judicial registration of the violations and offences a person has committed or has been suspected of.

Youth offenders of Moroccan origin in the Netherlands

Immigrants of Moroccan origin in Dutch society are strongly overrepresented in crime rates. Youth of Moroccan origin came into contact with police and law enforcement more often than any of the other ethnic minority groups, with 65% of Moroccan male adolescents having been placed under arrest at least once between the ages of 12 and 23, compared to 25% of the native Dutch population (Gijsberts, Huijnk & Dagevos, 2012). Crime rates drop during young adulthood to a level that is no longer distinguishable from that of other non-Western immigrants and eventually is similar to native Dutch levels in adulthood (Blokland & Nieuwbeerta, 2004). This desistance (i.e. refraining) from criminal activities by immigrants of Moroccan origin is said to result from an increase in social control; young adults find a life partner and are able to hold down a job, increasing social embedding. However, it was reported by Gijsberts et al. (2012) that when youth crime rates were controlled for by gender, age, education level, household income, urbanity, and living environment only a small

percentage of overrepresentation by youth and young adults of Moroccan origin in crime rates was explained for. This could indicate that male adolescent offenders of Moroccan origin not merely represent a similar group to the native Dutch juvenile offenders (when groups of similar characteristics are compared), but these offenders rather represent a separate group of offenders with a different set of triggers to offending and even a different set of offending behaviors.

Origins of delinquency

Many theories on the origin of offending exists, of which the social disorganization theory (Shaw & McKay, 1942) and the strain theory (Agnew, 1992; Wortley, 2009) are most influential in explaining offending in economically deprived populations, such as the immigrants of Moroccan origin in the Netherlands. While both theories emphasize the role of economic disadvantages on the neighborhood level, characterized by concepts such as low neighborhood SES, ethnic heterogeneity, residential mobility and family disruption on crime and delinquency rates (Sampson & Byron-Groves, 1989; Agnew, 1992), mechanisms through which this is theorized to take place differ. Social disorganization theory accounts for these crime rates by level of social organization, which is expressed in concepts such as level of local friendship networks, control of teenage peer groups on the streets, and level of organizational participation (Sampson & Byron-Groves, 1989). Decreasing levels of these factors within a neighborhood result in increasing social disorganization, leading to an increase in crime and delinquency rates. Ethnicity is not regarded as a factor holding influence on crime above and over the influences of neighborhood characteristics on social disorganization such as the ones described above.

Strain theory (Agnew, 1992) not only incorporates depriving factors actually experienced, such as seen in the social disorganization theory, but also takes into account the depriving factors that are anticipated by individuals. There are three major strains in this

theory which can be actually occurring or be anticipated; the removal of positively valued stimuli, the presentation of negative valued stimuli, and the strain of failure to achieve positively valued goals. Important in this theory is relative deprivation, stressing the importance of whether or not the individual experiences his or her state as deprived compared to the state of others to whom he or she feels comparable (Wortley, 2009). This subjective experience of strain is said to have the strongest links to criminal and delinquent behavior (Froggio & Agnew, 2007). The theory states that when actual and relative deprivation can be fully taken into account, the relation between immigration and criminal and delinquent activities should disappear (Wortley, 2009).

Position of Moroccan youth in Dutch society

While the position of immigrants of Moroccan origin in the Dutch host society has improved over the past years in terms of educational level and housing, especially when the second generation of immigrants is considered, the position on the job market has deteriorated in a pace faster than seen before 2008 (Gijsberts et al., 2012). After the economical crises hit in the Netherlands in 2008 the percentage unemployed non-Western immigrants, to which the Moroccan immigrants belong, has increased faster than that of the native Dutch population. Especially youth of Moroccan and Surinam origin are at a disadvantage with unemployment rates up to 28 and 27% respectively, compared to 4.5% of the native Dutch population. The average family income of Moroccan immigrants was below that of any of the native Dutch and other non-western immigrants, partially due to a high reliance on state benefits, adding to the marginalized position of immigrants of Moroccan origin in the Netherlands.

Offending characteristics

Based on strain theory it can be expected that the type of strain experienced by people might influence the type of crime they are most likely to resort to (Wortley, 2009). In case of economical deprivation for example, youth could turn to theft. Due to the

overrepresentation of offenders of Moroccan origin in crime and delinquency rates and the known disadvantaged economical position in which most Moroccan immigrant families reside (Gijsberts et al., 2012), it may, and has been, expected that the offences these male adolescents commit are relatively minor and focused on financial gain. Many studies involving police records have confirmed this notion so far. An overrepresentation of male adolescents of Moroccan origin was found in a 1984 birth cohort study performed by Blokland, Grimbergen, Bernasco and Nieuwbeerta (2010) and is also reported on by Gijsberts et al. (2012), both indicated that offenders of Moroccan origin relatively often committed property without and property including violence offences. SES has not always account for these differences however, as was shown in a study by both Gijsberts et al. (2012) in which only a fifth of the difference in offending between native Dutch offenders and those of Moroccan origin was accounted for by SES (amongst other indicators). In our former study (Veen et al., 2011) it was found that male adolescent offenders of Moroccan origin had a higher mean SES than male adolescents of Moroccan origin in the general population, suggesting a larger importance of the relative economical deprivation experienced by the male juvenile offenders.

Other studies have put the focus on the overrepresentation of male adolescents of Moroccan origin in violent and violent property offences. For example the study by Lahlah, Van der Knaap, Bogaerts and Lens (2013), has shown that an overrepresentation of male adolescents of Moroccan origin in serious violent offences (including robbery and extortion) was fully mediated by strong gender role orientations. These findings were explained through strain theory; due to the experience of structural deprivation of economical but also social nature, male adolescents were unable to exert their desired gender roles in a legally accepted way, resulting in frustration and leading to violent offending.

Criminal careers

Offenders of Moroccan origin, who are known to largely desist from criminal and delinquent activities during young adulthood (Gijsberts et al., 2012), often showed a higher mean number of offences committed compared to the native Dutch youth offenders who committed relatively more serious and diverse offences (Blokland et al., 2010; Veen et al., 2011).

Considering types of criminal careers, one of the most influential theories is the theory by Moffitt (1993), in which two distinct types of offenders are identified. The first is a life-course persistent offender, who is characterized by a early starting and persistent criminal career with relatively more serious and diverse offences committed, while the second type is the adolescent limited offender, who starts at a later age and desists from crime during young adulthood and who specialize in a less serious type of crime, such as theft. While these type of offenders have generally been recognized in samples of juvenile offenders (see for example Nijhof, Kemp, Engels, & Wientjes, 2008) there have also been studies showing the limited use of these trajectories in predicting adult and juvenile life time trajectories and mechanisms of desistence (Sampson & Laub, 2005).

Predictors of criminal careers

The main goal in finding trajectories of criminal careers is increasing the knowledge on these offenders and subsequently discover what course of action is best to be taken to decrease and even prevent harm done by these criminal activities to society as well as to the offenders themselves. Therefore, it is necessary to find indicators that can predict the life trajectory or career of a juvenile offender. A well documented predictor of future seriousness of offences is age at first police contact, as well as seriousness of the first crime registered (see for example Nijhof et al., 2008). When the offender was younger at first police contact with a more serious first offence, the chances of having a longer criminal career entailing

more serious offences was larger than when the offender is older or has committed a less serious crime. It has appeared however, that the predictive value of first type of offences could be limited. For example offenders who's first offence was a violent one were more likely to recidivate with a similar offence but these offenders did not become specialists in these types of crime (i.e. committing predominantly violence offences) (Blokland & Nieuwbeerta, 2004). Moffitt's (1993) notion of increasing seriousness in criminal offences over time for life-time persistent offenders has also been challenged by Blokland et al. (2010), who did not find this increase in seriousness during criminal careers of recidivist and multiple-offenders in their cohort sample of youth of native Dutch, Surinam, Turkish and Moroccan delinquent youth.

Research questions

Comparison TULP and JDS. The main research question in this paper is whether our former findings (Veen et al., 2011), i.e., that male adolescent offenders of native Dutch and Moroccan origin represent significantly different types of offenders is replicated using follow up and extended data. The original TULP registrations were used, a residence registration used by the Juvenile Justice Institutions (JJI) in the Netherlands. For follow up and extended data, the more extensive Judicial Documentation System (JDS), official judicial registrations of the violations and offences a person has committed or has been suspected of were used. A comparison will be drawn up between the TULP and JDS data offender typologies and possible differences will be investigated at offence level, answering the question: *'What types of offences are registered for male adolescent offenders of native Dutch and Moroccan origin based on JDS data?'*. It is hypothesized that while JDS data will hold more registered offences compared to TULP data, the former findings concerning offender typology will be replicated. The four-class solution is expected to persist, with the property, violent, sexual and arsonists offender types reemerging. When considering offence categories only, comparing

the native Dutch and Moroccan offenders, it is expected that male adolescent offenders of Moroccan origin more often have property related offences registered, both violent and nonviolent, based on theories of economical deprivation and strain theory (Agnew, 1992; Shaw & McKay, 1942). It is also expected that in line with former findings, more severe offences (arson, sexual and severe violent offences) will be mostly registered for native Dutch offenders.

Criminal careers. The follow up period will be taken into account when addressing the following question: *'What career types can be deduced from the types of offences registered for the male adolescent offenders and what differences in these career types are found between adolescent offenders of native Dutch and Moroccan origin?'*. Longitudinally, an increase is expected in the percentage of registered offenders of more serious offences compared to offenders of less serious offences, reflecting the increasingly more serious and violent offences committed by chronic offenders in the course of their criminal career (Moffitt, 1993). Ethnic differences in offender typology will be explored. This will be examined by using extended JDS data including follow up. It is expected that chronic offenders, show more serious offences and differentiate themselves from the offending career paths of the short term offenders, who mainly show less serious and less diverse offences (Blokland & Nieuwbeerta, 2004; Moffitt, 1993). It is expected that SES will differ for the different offender types, with types characterized by property and violent offences showing an overrepresentation of adolescent offenders with a lower SES compared to other types of offenders (Veen et al., 2011).

Prediction of offending. The last question answered will be: *'What is the predictive value of age at, and category of first offence registration and are there differences to be found between offenders of native Dutch and Moroccan origin?'*. It is expected that, similar to the original study by Veen et al. (2011) adolescent offenders of Moroccan origin will be younger

at the time of their first registered offence than the native Dutch offenders and will have more registered offences on average compared to the native Dutch offenders (Nijhof et al., 2008). Younger first time offenders will show a higher mean number of registered offences, as well as a more diverse and serious offence pattern (Moffitt, 1993). Considering the category of first offence, it is hypothesized that the highest predictive value of the first registered offence will be held by the more serious violent offences and that these first offences will be most predictive for the total number of offences a male adolescent will be registered to have committed on average (Blokland & Nieuwbeerta, 2004; Nijhof et al., 2008). In contrast, these first offences will not be of predictive value for the type of offences male adolescents were registered for (Blokland & Nieuwbeerta, 2004).

Method

Participants

On March 7th, 2008, official records of 299 male adolescents of native Dutch and Moroccan origin who were placed in pre-trail arrest in a Dutch Juvenile Justice Institution (JJI) were received by the researchers (μ = 17.67 years of age, *SD* = 1.37, range: 13.46 - 20.28). The adolescents, who were suspected of committing one or more offences and awaiting trial, were placed in pre-trial detention out of protection of others or themselves. Offenders of Moroccan origin were slightly younger at entering the study (μ = 17.47 years, *SD* = 1.37) compared to the offenders of native Dutch origin (μ = 17.86 years, *SD* = 1.34; $t(286) = 2.42$, $p < .05$). For inclusion in the sample, the male adolescents had to be placed in pre-trial detention for over a week, be allowed to receive a visitor and be from native Dutch or Moroccan origin. The sample consisted of 141 male adolescents who were of Moroccan origin, of whom 19.1% was born in Morocco and 80.9% in the Netherlands. Of the adolescents, either both (in 92.1% of the cases) or one of both parents (in 7.9% of the cases) were born in Morocco. The remaining 158 male adolescents were Dutch natives, of whom both parents were born in the Netherlands. Of these native Dutch adolescents 5% had one or both paternal and 9.5% had one or both maternal grandparents born outside the Netherlands, such as in other West-European countries, Indonesia or Dutch Antilles. Of the 72.9% of the participants who were still attending school, the majority was enrolled in either low (30.4%) or medium vocational education (18.4%). See Veen et al. (2011) for further details of the sample. Of 288 male adolescent offenders, 52% reoffended during the follow up period of two years.

Procedure

After having gained permission from the Dutch Ministry of Justice, 10 out of 11 JJIs in the Netherlands agreed to participate in the study. For a detailed description of the

procedure, see Veen et al. (2011). After written consent was received, an appointment was made for the administering of an interview and criminal records were requested from the Ministry of Justice. Confidentiality was assured to the adolescents and data was stored anonymously. Eight adolescents were excluded from the sample due to incomplete data (four of Moroccan origin and four native Dutch). During follow up, two native Dutch adolescents had been acquitted of their suspected offences and no longer had a criminal record and one native Dutch adolescent had only committed opium offences. These adolescents were removed from the data sample. The total sample used for analyses of criminal careers consisted of 288 participants (151 of native Dutch and 137 of Moroccan origin). Data from the criminal records, and information on socio-economic status and ethnicity were used in the present study.

Measures

Criminal records. For the comparison between the previous and current study, both TULP registrations (*TenUitvoerLegging van vrijheidsbenemende straffen en maatregelen in Penitentiaire inrichtingen*) and Judicial Documentation System (JDS) records were used.

TULP. The main objective of TULP registrations is securing a safe, effective and humane enforcement of custodial sentences and custodial measures in Justice Institutions. Registered on this form are for example the criminal offences the adolescent is suspected of or has committed, but also information on religion, ethnicity, health and medication use. Criminal law article number of the offences registered to have been committed until March 7th, 2008 were collected from these records for the former study (Veen et al., 2011). The offences found in these records were classified in ten categories based on the classification system proposed by Van Kordelaar (2002, see Table 1). For statistical analyses, seven categories remained; mortal offences and mortal offences extra were combined with severe violent offences (as ‘severe violence offences’) to allow for enough participants in this

category to conduct further analyses (see Table 1). Opium was not included in analyses due to scant occurrence. The remaining categories were scored in a dichotomous and in a numerical manner to allow for both typology analyses and absolute measures of offending.

Judicial Documentation System (JDS). JDS is an official record of violations and offences a person is suspected of, has committed or has been acquitted of, the qualitative nature of that offence or violation and the sentencing based on these offences and violations the person has received. Because the male adolescent offenders have not been sentenced for every offence registered in the JDS documents, but can also have been acquitted of offences for various reasons, the term 'registered offences' will be used in this paper indicating offences with which the juvenile offenders have been associated. The JDS records were received by the researchers on March 2nd, 2010. The seven categories based on Van Kordelaar (2002) were scored both numerical as well as dichotomous. The total number of registered offences was scored as well. First registered offences were scored based on date of (suspected) execution as well as on offence category. In case of multiple offences registered on the same date belonging to different categories, the most severe offence was scored. Of eight offenders date of first offence could not be scored due to unclear registrations of dates. For four of these eight offences, the possible first offences all belonged to the same offence category making scoring possible. However, the other four first offence categories remained unclear and were scored as missing. To compare JDS and TULP data, a cut off was created retrospectively at March 7th, 2008 and the seven offence categories were scored, both dichotomously as well as numerically.

Socioeconomic status. Socioeconomic status was based on the postal codes of participants' parents' homes during the original period of data collection. This calculation was performed for all postal codes in the Netherlands by the Netherlands Bureau for Economic Policy Analyses, a section of the Social and Cultural Planning Office and is based on mean

income, education level, percentage unemployed and percentage households per neighbourhood (Knol 1998). The resulting order number (0-4, with three decimal places and 0 being the highest SES) was reversed (0 indicating lowest SES) for ease of interpretation in analyses.

Statistical analyses

Chi-square tests, *t*-tests and ANOVAs were used to test for differences between the native Dutch male adolescents and those of Moroccan origin on types of offences committed, age at and type of first offence, number of offences committed and SES. Predictive value of age at first registered offence was tested using regression analyses. To identify different types of offenders exploratory Latent Class Analysis (LCA) was used. LCA is used for the analysis of typologies by calculating a set of mutually exclusive subgroups of a latent variable that account for the distribution of cases in a cross tabulation of observed discrete variables (McCutcheon, 1987). Due to the dichotomous nature of the observed variables used, neither the assumption of multivariate normality nor the assumption of continuity of measurement have to be met. Both fit statistics of the proposed model as well as the parameters of the different subgroups that occur are provided as output. Entropy is a measure of model fit to the observed data, and must reach levels over .80 to indicate satisfactory fit. Number of classes are determined by the Vuong-Lo-Mendell-Rubin Likelihood Ratio Test, a test indicating whether a model with N+1 classes (H1) provides a better fit than the N class model (H0).

Table 1

Overview of offence categories

Offence category in the present study	Offence category by Van Kordelaar (2002)	Offences
Property	Property offences without violence	receiving unlawfully obtained goods; embezzlement; deception/fraud; theft; embezzlement in function; burglary committed without/with others; participating in a criminal organization; counterfeiting/forgery/coining
Property with violence	Property offences involving violence	theft involving violence; extortion
Minor violence	Minor violent offences	resistance/obstinacy; simple assault; simple assault causing bodily harm; vandalism/material damage
Moderate violence	Moderate violent offences	threatening with violence; weapon property; overt assault/battery committed with others; overt assault/battery committed with others and causing bodily harm and/or material damage; overt assault/battery causing severe bodily harm
Severe violence	Severe violent offences Mortal offences Mortal offence extra	aggravated assault; kidnapping manslaughter murder
Sexual	Sexual offences	sexual intercourse with child (12 years or younger); sexual intercourse with adolescent (12-16 years); fornication with an unconscious person, mentally disordered or child; indecent exposure; indecent assault; rape
Arson	Arson	arson compromising safety of material goods; arson causing mortal danger; arson causing severe bodily harm

Note. Drug offences, entailing property/traffic/smuggling/manufacturing of soft and/or hard drugs, is excluded from analyses due to scant occurrence in the present data set.

Results

Comparing TULP and JDS data

Offender types. In order to compare offender types formerly deduced from TULP data with those deduced from JDS data, Latent Class Analysis (LCA) was performed based on the dichotomous scores on the seven offender categories (Table 2). This analysis indicated a significant four-class model to be the best fitting LCA-solution to the JDS data according to the Vuong-Lo-Mendell-Rubin Likelihood Ratio Test ($p < .05$) (see Table 2). The Akaike Information Criterion (AIC) was lower for the four-class model than for the three-class model. The Bayesian Information Criterion (BIC) however had slightly increased. The Entropy of the four-class model had increased compared to the three-class model (0.81), indicating a better model fit overall. The average class probabilities were high (0.85 - 0.98), indicating that the participants were properly classified to their latent class. A five-class model did not improve the model fit. The four class model found using JDS data was comparable to the four-class model found based on the TULP data (Veen et al., 2011).

While latent class probabilities showed slight alterations, the types of classes found based on TULP data persisted in JDS data (Figure 1). The *violent offender type* was characterized by high probabilities on registered offences of the moderate ($P = 1.00$) and minor violence ($P = .86$) categories. The *property offender type* was characterized by high probabilities of registered offences of the property ($P = .89$) and property with violence ($P = .64$) categories, while having low probabilities on registered offences of moderate ($P = .27$) and severe violence ($P = .00$) categories. The *sexual offender type* was characterized by probability of 1 on registered sexual offences and very low probabilities on remaining categories of offences ($P \leq .11$). An exception to this is the '*arsonists*' type, which based on the JDS data was described as a severe violent/arsonist class due to lower probabilities of

registered arson offences (*P* = .38), but higher probabilities of registered severe violence offences (*P* = .34).

Table 2

LCA model fit statistics

	Voung	AIC	BIC	Entropy	Average probability
			JDS		
3 classes	.049	2084.35	2168.60	.74	.85 - .96
4 classes	**.005**	**2071.34**	**2184.89**	**.81**	**.85 - .98**
5 classes	.079	2073.12	2215.97	.81	.72 - .98
			JDS including follow up		
4 classes	.249	2065.27	2178.82	.80	.69 - .98
5 classes	**.043**	**2067.86**	**2210.72**	**.82**	**.72 - .97**
6 classes	.045	2070.12	2242.28	.78	.73 – 1.00

Note. JDS consists of offences registered to have taken place before March 7th, 2008. JDS including follow up consists of offences registered to have taken place before March 2nd, 2010. Bold script indicates final models.

An one-way ANOVA was performed to further describe the JDS based four class LCA solution. Violent offenders were younger when their first offence was registered (μ = 14.44, *SD* = 1.31) compared to arsonists (μ = 15.43, *SD* = 1.84; *F* (3, 276) = 2.83, *p* < .05), but they were older (μ = 17.90, *SD* = 1.17) at entry to the data sample compared to property offenders (μ = 17.35, *SD* = 1.48; *F* (3, 284) = 4.18, *p* < .01). Violent offenders showed the highest number of registered offenders (μ = 11.43, *SD* = 6.29), compared to property offenders (μ = 7.45,*SD* = 5.18), arsonists (μ = 4.68, *SD* = 4.16), and sexual offenders, who had the lowest number (μ = 2.62, *SD* = 1.43; *F* (3, 284) = 24.86, *p* < .001). Property offenders showed the highest percentage of offenders of Moroccan origin (66%) compared to violent offenders (45%) and arsonists (26%), while sexual offenders showed the lowest percentage (10%; *F* (3, 284) = 10.40, *p* < .001). There was no difference in mean SES found between the latent classes (*F* (3, 272) = .89, *p* = .448).

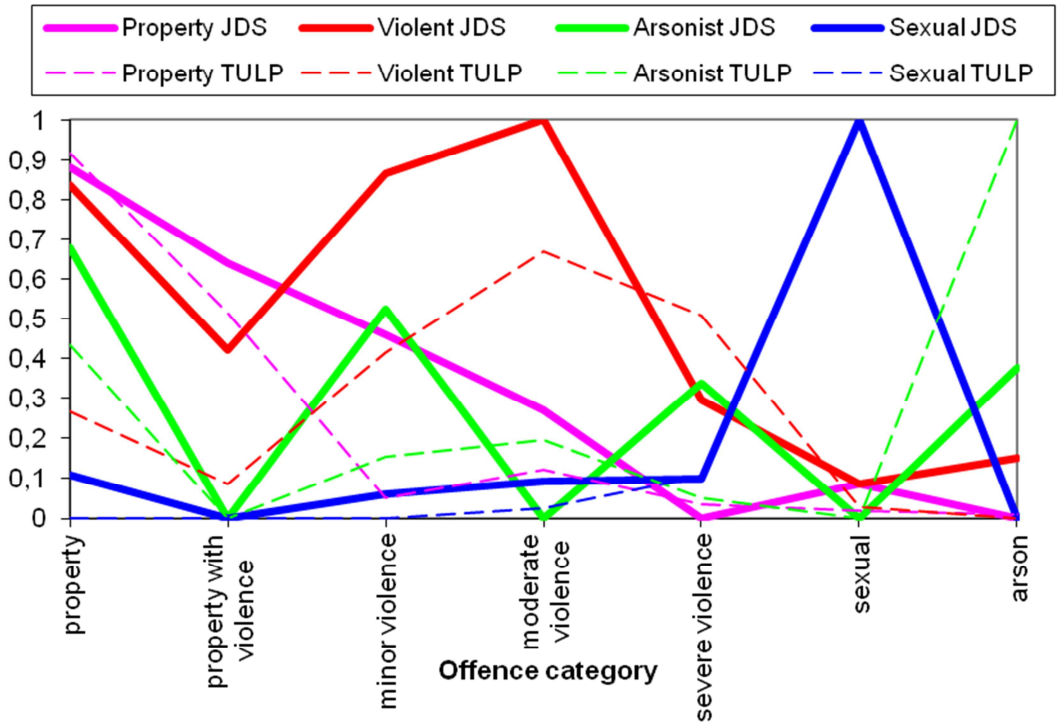

Figure 1. Probability of registered offence categories per offending type based on TULP and JDS registrations up to March 7th, 2008.

Offence categories. Strong similarities were evident across TULP and JDS data, however important differences also emerged. The changing class-sizes indicated differences in offences registered between TULP and JDS (Table 3). To examine the origin of these differences, registered offence categories were considered, using independent sample *t*-tests and Chi-Square tests. The mean number of offences registered in TULP was 2.9 (SD = 1.79). A *t*-test indicated a significant difference between the mean total number of registered offences for offenders of native Dutch ($\mu = 2.55$, $SD = 1.61$) and Moroccan ($\mu = 3.48$, $SD = 1.96$) origin (t (289) = -4.39, $p < .001$). While JDS data comprises more registered offences than TULP data ($\mu = 9.08$, $SD = 6.27$), a similar trend towards a significant difference between male adolescent offenders of Moroccan origin

(μ = 9.82, *SD* = 5.63) and those of native Dutch origin (μ = 8.41, *SD* = 6.75) became evident (*t* (286) = -1.92, *p* = .056)[1]. TULP registrations held less registered offenders on each of the offence categories, with especially pronounced differences on minor and moderate violent offences (Table 4). Chi-Square results indicated similar ethnic differences for the different offence categories between the JDS and the TULP data. The overrepresentation of male adolescent offenders of Moroccan origin was less pronounced for property offenders in JDS data, while it became more pronounced in the property with violence offence category (Table 4). Moreover, based on JDS data, a trend towards significance was found in severe violence offences, with an overrepresentation of native Dutch male adolescent offenders (22.5% of native Dutch compared to 13.9% of Moroccan origin).

Table 3

Number of offenders in each offender type

LCA offender type	TULP (%)	JDS (%)
Violent offender	59 (20%)	157 (55%)
Property offender	183 (63%)	91 (32%)
Arsonist	20 (7%)	19 (7%)
Sexual offender	27 (9%)	21 (7%)
Total	289 (100%)	288 (100%)

Note. Offences registered to have been committed before March 7th, 2008 were used.

JDS including follow up (criminal career until March, 2010)

Offence categories. The mean total number of offences registered for the adolescent offenders was 11.39 (*SD* = 8.02). A *t*-test indicated that adolescent offenders of Moroccan origin had a higher number of registered offences (μ = 12.80, SD = 7.47) compared to native

[1] The large standard deviation is due to a number of extreme multiple offenders; the top 5 percent offenders account for 407 (15.6 %) of 2616 offences committed, having committed 19 to 39 offences each. Out of the 15 extreme multiple offenders, 9 were of native Dutch origin. When these extreme multiple offenders are leveled to 19 offences each, leaving these extreme multiple offenders scoring above the 95th percentile but eliminating the strongly skewed right tail of the distribution, the significant effect between offenders of native Dutch and Moroccan origin found based on TULP data is replicated (*t* (286) = -2.76, *p* < .05) with native Dutch offenders committing 7.89 (*SD* = 5.25) and offenders of Moroccan origin committing 9.51 (*SD* = 4.69) offences on average.

Dutch adolescent offenders (μ = 10.10, *SD* = 8.31; *t* (286) = -2.89, *p* < .05). Table 4 depicts the percentage of offenders who have at least one registration within the different categories of offences. Increases in these percentages compared to JDS without follow up indicate one or more registrations for adolescent offenders who previously had no registrations in this category. An increase of over 5% of offenders was found for each type of the violence offences, larger than for any of the other offence types, indicating that these types of offences were committed most often for the first time by recidivist during the two-year follow up period. Next, Chi-square tests were performed to test for ethnic differences in categories of offences registered (Table 4). Significant differences were found for property, property with violence, sexual offenses and arson offences. Compared to native Dutch adolescent offenders, a significantly larger percentage of adolescent offenders of Moroccan origin had one or more registered offences of the property and property with violence category. In case of the sexual and arson offences this was reversed; a significantly larger percentage native Dutch adolescent had at least one or more offences of this type registered, compared to the adolescents of Moroccan origin. Compared to JDS data until March 7th, 2008, the trend towards significance for the severe violence type of offences has disappeared when the follow up data was included, while the significant differences on property, property with violence, sexual and arson offences were replicated.

Offender types based on JDS including follow up. Latent class analysis was performed using the dichotomous variables of offence category (see Table 2). A five-class solution provided the best representation of the data according to the Voung-Lo-Mendell-Rubin Likelihood Ratio Test for the four (H0) versus the five class solution ($p < .05$). The Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC) were slightly higher for the five-class model than for a four-class model, indicating a poorer model fit. However, the four-class model was non-significant (Voung $p = .249$) and had a lower

entropy than the five-class model (.80 versus .82). A six-class model did not improve the model fit. The average class probabilities were sufficient to high (0.72 - 0.97), indicating that participants were properly classified to their latent class.

Table 4

Types of offences committed compared by ethnic group.

		Property without violence	Property with violence	Minor violence	Moderate violence	Severe offences	Sex offences	Arson
TULP	Total (*N* = 291)	64.9%**	33.3%**	13.7%	24.4%	15.1%	11.3%**	7.2%**
	Dutch (N = 154)	49.4%	22.7%	16.2%	27.9%	19.5%	16.2%	11.7%
	Moroccan (N = 137)	82.5%	45.3%	10.9%	20.4%	10.2%	5.8%	2.2%
JDS	Total (*N* = 288)	78.8%**	42.7%**	64.2%	60.1%	18.8%*	14.2%*	11.1%**
	Dutch (N = 151)	68.9%	28.5%	65.6%	62.3%	23.2%	18.5%	17.2%
	Moroccan (N = 137)	89.8%	58.4%	62.8%	57.7%	13.9%	9.5%	4.4%
JDS including follow up	Total (*N* = 288)	80.2%**	47.2%**	70.1%	68.1%	24%	14.6%*	11.5%**
	Dutch (N=151)	70.9%	31.1%	70.2%	67.5%	27.8%	18.5%	17.9%
	Moroccan (N=137)	90.5%	65.0%	70.1%	68.6%	19.7%	10.2%	4.4%

Note. TULP and JDS consist of registered offences until March 7th, 2008, JDS including follow up consisted of registered offences until March 2nd, 2010. Percentages based on dichotomous scores on offence type. * $p < .05$, ** $p < .001$ based on chi-square results comparing offenders of native Dutch and Moroccan origin.

Figure 2 depicts the observed probabilities of committing one or more of the seven offence categories for each of the offender types. The first class (54% of 288 offenders) was characterized by a high probability on moderate violence (*P* = 1), minor violence (*P* = .79) and severe violence (*P* = .31), as well as high probabilities on property (*P* = .91) and property with violence (*P* = .67) This class was labeled '*violent offender type'*. The second class (18%

of 288 offenders) was characterized by high probabilities on property (*P* = 1.00), property with violence offences (*P* = .64) and minor violence (*P* = .60), while having low probabilities on moderate (*P* = .00) and severe violence offences (*P* = .04). This class was named '*property and minor violent offender type*'. The third class (17% of 288) was characterized by a probability of 1 on minor violence offences, a high probability on moderate violence offences (*P* = .78), and a relatively high probability on arson (*P* = .32). This class was therefore named '*violent offender/arsonist type'*. The fourth class (7% of 288 offenders) was characterized by the high probability on sexual offences (*P* = 1.00), and having low probabilities (*P* < .18) on the other types of offences. This class is therefore named '*sexual offender type*'. The fifth class (5% of 288) was characterized high probabilities on property (*P* = .57) and property with violence (*P* = .59) offences, while having low probabilities on severe violence offences (*P* = .15) and arson offences (*P* = .09) to probabilities of 0 on the other types of offences, and was therefore named '*property offender type'*.

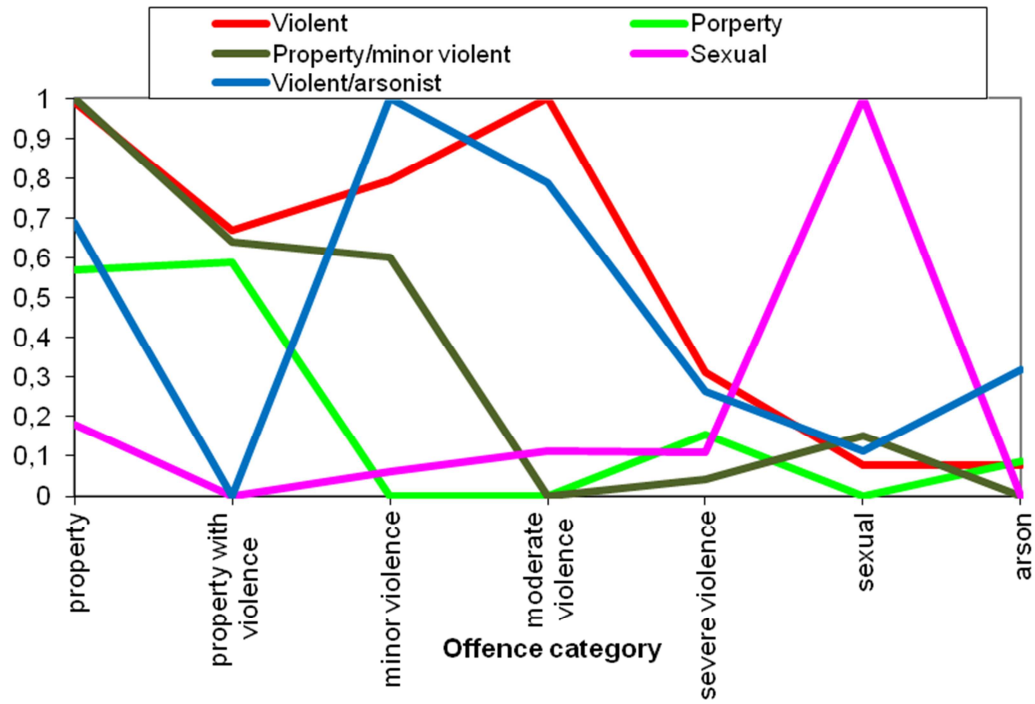

Figure 2. Probability of registered offence categories per offending type based on JDS registrations up to March 2nd, 2010.

An ANOVA was performed to further inspect these offender types. The male adolescent offenders of the violent offender type were younger at their first registered offence compared to adolescent offenders of the property offender type (F (4, 275) = 7.37, $p < .001$, Table 5). They also showed a higher number of registered offences than any of the other offender types (F (4, 283) = 23.05, $p < .001$). Both the adolescent offenders in the property and violent offender types were more often of Moroccan origin than the adolescent offenders in the sexual and violence and arson types were (F (4, 283) = 9.28, $p < .001$). There were no significant differences found on SES (F (4, 271) = .96, $p = .428$), nor on age at entering the data sample (F (4, 283) = .53, $p = .714$).

Table 5

Descriptives of offender types based on JDS including follow up data

	Age at First offence	Age at entering sample	Mean offences registered	Ethnicity	SES
Violent offenders	14.30 a (1.34)	17.73 a (1.30)	14.49 a (8.13)	.57 a (.50)	1.21 a (1.12)
Property offenders	16.33 b (.86)	17.79 a (1.04)	2.23 b (1.74)	.38 abc (.51)	1.27 a (1.08)
Prop+ minor violent offenders	14.72 a (1.35)	17.57 a (1.42)	8.58 c (4.54)	.60 ab (.50)	1.24 a (1.05)
Sexual offenders	14.89 ab (1.95)	17.29 a (1.80)	2.53 b (1.07)	.11 c (.32)	1.60 a (1.00)
Violent offenders and arsonists	14.82 a (1.46)	17.72 a (1.45)	10.44 c (7.45)	.21 c (.41)	1.50 a (1.16)

Note. Based on Bonferroni post hoc tests. Different subscripts refer to significant differences ($p < .05$) between offender types. Standard deviation shown in parentheses.

Predictive values based on JDS including follow up

Age at first registered offence. A series of separate regression analyses using age at first registered offence as predictor indicated significant prediction of future membership of property and violent offender types, as well as a higher likelihood of registration in property and moderate offence categories (Table 6).

Table 6

Predictive value of age at first registered offence on number of offences committed, offender type membership and registration within offence category

		F	R^2	Beta	*t*
Total number of registered offences		24.24**	.08	-.28	*-4.92*
Offender type	Violent	14.17 **	.05	-.22	-3.76
	Property	20.99 **	.07	.27	4.58
	Property/minor violent	.51	< .01	.04	.72
	Sexual	.74	< .01	.05	.86
	Violent/arsonist	1.30	< .01	.07	1.14
Offence category	Property	20.26 **	.07	-.26	-4.50
	Property with violence	3.31 ‘	.01	-.11	-1.82
	Minor violence	2.50	< .01	-.09	-1.58
	Moderate violence	15.07**	.05	-.23	-3.88
	Severe violence	.20	< .01	.03	.45
	Sexual offences	.02	< .01	-.01	-.13
	Arson	2.61	< .01	-.10	-1.62

Note. Regression of age at first registered offence on dependent variables is depicted. *Df* = 278 for each of the analyses. Except from total number of offences committed, dependent variables were added as dummy variables with a value of 1 indicating group membership or registration within that offence category.

First offence categories. The mean age at first recorded offence was 14.6 years of age[2] (*SD* = 1.45, range: 11.42 - 17.91). A *t*-test indicated a significant difference of age at first registered offence ($t(278) = 2.30$, $p < .05$), with adolescent offenders of Moroccan origin being younger (μ = 14.39 years of age, *SD* = 1.34) compared to native Dutch adolescent offenders (μ = 14.79 years of age, *SD* = 1.53). See Table 7 for distribution of first recorded offence categories. Of 4 offenders (1%), first offences could not be determined due to unclear registrations. A Chi-square test indicated an effect of ethnicity on type of first offence registered ((χ^2 (6, *N* = 284) = 36.75, $p < .001$, Table 7). Property offences with and without violence were more often registered for offenders of Moroccan origin, while minor, moderate

[2] Age at first registered offence: *N* total = 280; *N* Moroccan = 137; *N* native Dutch = 143
Category of first registered offence: *N* total = 284, *N* Moroccan = 136, *N* native Dutch = 148

and severe violence offences, arson, and sex offences were more often than expected registered for native Dutch male adolescent offenders.

Table 7

Distribution of ethnicity over first recorded offence categories

		Offender's ethnicity		
		Native Dutch	Moroccan	Total
first offence category	property	46.6%	53.4%	36.3%
	Moderate violence	59.4%	40.6%	22.5%
	Minor violence	57.1%	42.9%	14.8%
	Property with violence	14.7%	85.3%	12%
	Sexual offences	87%	13%	8.1%
	arson	80%	20%	3.5%
	Severe offences	62.5%	37.5%	2.8%
	Total	52.1%	47.9%	100%

Note. Participants with missing categories of first registered offences were not included in analysis.

An ANOVA indicated no significant differences between offenders with different categories of first registered offences on age at first registered offence, age at first measurement moment, and socioeconomic status. Significant differences were found on total number of registered offences (F (6, 283) = 4.57, $p < .001$) between the 'sexual offence' ($\mu = 5.22$, $SD = 5.69$) compared to the 'property' ($\mu = 12.73$, $SD = 8.18$), 'minor violence' ($\mu = 12.57$, $SD = 7.20$), and 'moderate violence' ($\mu = 12.36$, $SD = 8.66$) categories of first registered offenders.

The category of first offence registered was plotted against the five types of offenders found in JDS data including follow up to examine their predictive value (Table 8). The first offence categories 'minor violence' and 'moderate violence' appeared to be of most

predictive value. First offences of the severe violent, property, arson and sexual categories appear to hold less predictive value.

Table 8

Frequency of first registered offence category plotted against future offending type membership

	LCA offender types based on JDS including follow up					
Offence categories	Violent offenders	Property offenders	Prop+min viol ofenders	Sexual offeders	Violent arsonists	Total
Property	54	1	37	2	9	103
Violent property	21	7	6	0	0	34
Minor violent	24	0	7	0	11	42
Moderate violent	49	0	0	0	15	64
Severe violent	2	3	0	0	3	8
Sex offences	1	0	2	17	3	23
Arson	2	2	0	0	6	10
Total	153	13	52	19	47	284

Discussion

The main question this study set out to answer is whether or not youth offenders of Moroccan origin represent a significant different type of offenders than those of native Dutch origin. This question was divided into four hypotheses concerning type of offenders, categories of offences and predictive value of offending characteristics.

The first hypothesis concerned the expected replication of our former results (Veen et al., 2011). Despite holding many more offences, the four-type structure found based on TULP data is replicated based on the JDS data. The types of offenders found were similar to those found based on TULP data, albeit less clear for the arsonists type of offenders. The replication of similar offence types based on a different and more extensive data source indicates that these types are robust. Inspection of offence categories differences between TULP and JDS data indicated an increase in registered offences for each of the offence categories, with the largest increase in violent offences. The mean number of offences committed also increased substantially: from a 2.9 (SD = 1.79) average based on TULP data to an average of 9.08 (SD = 6.27) based on JDS data based on the same period; until March 7th, 2008. This increase is due to the nature of the registrations used. Compared to TULP, JDS is a more extensive document in which all the offences committed by an offender are registered, as well as the offences that a person was suspected of, acquitted of, or could not be sentenced for. This is decisively different from the use of the TULP registrations, which are mostly used for the correct enforcement of custodial sentences and measures, in which absolute number of offences may be of less value than types of offences committed. The type of registration used is also the most likely explanation for the higher mean number of offences found here compared to other studies (see for example Nijhof et al. (2008), who used a regional police system and Blokland et al. (2010), who used the *Herkenningsdienstsysteem* (HKS), the official police registration system in the Netherlands). However, former findings of ethnic

overrepresentations were replicated, and a significant underrepresentation of male adolescent offenders of Moroccan origin in the category of severe violence offences was found. While this is an additional effect, it does validate the earlier conclusion that offenders of Moroccan origin are relatively less often associated with more serious offences compared to offenders of native Dutch origin. Overall, it can be concluded that former findings by Veen et al. (2011) can be generalized across data sources.

Once the similarities and discrepancies between TULP and JDS data were established, the following analyses were conducted using JDS data including a follow-up period of two years. Registered offenders of the sexual offender type were largely excluded from conclusions, due to the specific nature of these offenders and the punitive measures received upon conviction (e.g. Boonmann, Nauta-Jansen, Hart-Kerkhoffs, Doreleijers, & Vermeiren, 2012). Sex offenders are often incarcerated and taken into judicial youth care for longer periods of time compared to less serious offenders, limiting possibilities to reoffend in a two year follow up period. This also explains the low mean number of offences committed by the sexual offender type.

The second hypothesis, that native Dutch adolescent offenders would commit the more severe offences relatively more often, while adolescent offenders of Moroccan origin would show an overrepresentation in property offences of violent and nonviolent nature, was partly confirmed. Offenders of Moroccan origin were strongly overrepresented in the property offences of violent and nonviolent nature. No overrepresentation of either ethnicity was found in the percentage of offenders with registered violent offences, either minor, moderate or severe. Relatively more native Dutch offenders had sex and arson offences registered. These results confirm our earlier findings (Veen et al., 2011) based on TULP-data. Longitudinally, the increase in property with violence and minor, moderate, and severe violent offences was

larger than that in property offences, confirming Moffitt's (1993) theory that offences grow more serious when the criminal careers progress.

The third hypothesis is confirmed as well; the five offender types found based on extended JDS data showed a higher specificity in offender types, with for example the property only offender type. The five different types of offenders tentatively support the adolescent limited and the life-time persistent offenders of Moffitt (1993). Specifically, offenders committing relatively less serious and more specific offences (i.e. only committing property offences) became visible in the property offender type, possibly indicating that these types of offenders belong to the adolescence-limited offenders. Compared to these offenders, the other three types of offenders in which moderate and severe violent offences, as well as arson achieved (relatively) high propensity scores, indicate a more versatile and serious offending pattern and possibly indicate a higher possibility of becoming a life-time persistent offender. Also consistent with Moffitt's theory (1993) is that property type offenders were older than violent, property/minor violent and violent/arsonist types of offenders. The number of offences registered for these adolescent offenders was also lower than for the relatively more severe offender types: violent, property/minor violent and violent/arson offender types. While property offenders know a strong overrepresentation of Moroccan adolescents, only 38% of registered offenders in the property offender type was of Moroccan origin. This absence Moroccan offenders in the possibly adolescent-limited offender type is notable, especially taken into consideration the desistence from criminal activity typical for offenders of Moroccan origin (Gijsberts et al., 2012). Different from what was expected, SES did not account for any differences in any of the latent classes found. This indicates a possible consistency with the concept of relative deprivation (Wortley, 2009), which states that the relative experience of deprivation is more important in predicting outcomes than actual economical deprivation. A feeling of relative deprivation can be expected amongst male

adolescent offenders of Moroccan origin. Of all immigrant groups in the Netherlands, the Moroccan immigrant group holds the strongest marginalized position in Dutch society, and experiences the highest level of discrimination (Gijsberts et al., 2012).

The fourth hypothesis concerning predictive value of age at first registered offence and type of first registered offence, states that offenders of Moroccan origin would be younger at the time of their first registered offence and that they would show higher numbers of registered offences on average compared to native Dutch offenders. This hypothesis is confirmed as well. Being younger at a first registered offence is related to a higher number of registered offences, as well as significantly larger chances of ever committing moderate violence and property offences and belonging to the violent type of offenders, and a smaller chance of belonging to the property type of offenders. First registered offences held predictive value for future offender type membership. Especially offences of the minor and moderate offence categories were predictive of belonging to the violent, property/minor violent, and violent/arsonist types of offenders. This is an important prediction, since these offender types know the highest numbers of registered offences, as well as high offence versatility, possibly indicating lifetime persistent offenders (Moffitt, 1993). Those with a property with violence offence registered as first offence were highly unlikely to be a future member of the sexual or violent/arsonist type of offenders.

Strengths and limitations

This study has several limitations. The first has to do with the source of data; official police records. It is widely known that the dark number of offences (those not known to the police) is high. However, the problem of dark number of offences is always present in studies of criminal and delinquent activity; even with self-reports not all offences are reliably reported. Using official records could therefore be considered a strength, taken into account that the current sample partly constitutes of offenders of Moroccan origin, who are known to

deny involvement in criminal activities, even in the face of evidence, more so than offenders of native Dutch origin (Weerman, 2007). Using self-report could have therefore lead to a distortion in which native Dutch adolescent offenders acknowledge more offences compared to adolescent offenders of Moroccan origin. In addition, the offences of which a juvenile delinquent has been or is suspected of, but for which he is not (yet) found guilty, are taken into account in this study. While this might seem to result in an excess of offences registered, it is important to note that approximately 90% of all offences a juvenile has been suspected of have actually been committed (Blom, Oudhof, Bijl, & Bakker, 2005). When sentencing fails, this is usually due to a lack of evidence, and not due to innocence of the juvenile at trail. Taking these offences into account therefore results in a more accurate description of the offences committed by the juveniles and a lower dark number of offences.

A second limiting factor is that length of criminal career has not been taken into account in this study, although desistence of criminal activity is an important aspect of Moffitt's theory (1993). Some of the male adolescent offenders did (appear to) desist from criminal activities; 48% of offenders had no registered offences during the follow up period. However, the follow up period was too short to be conclusive on this matter, as an earlier study by Blokland and Nieuwbeerta (2004) indicated a reoffending rate of 30% within two years and 50% within five years. The reoffending rate of 52% in the current study over a follow up period of two years is relatively high. Conclusions to this matter are also hampered by the fact that adolescent offenders entered the sample at different ages (from 12-18 years old), thus possibly even before desistence is expected to take place (for example somebody who entered the sample at age 15 is not yet expected to start desisting, while an adolescent who entered at 18 might have already entered the process of desistence during young adulthood). It should however be noted that while effects of age at first registered offence were often found, no effect was found of age at entering the sample. This makes it probable

that the stage a male adolescent offender's criminal has reached, is of limited influence on the measures used in this study.

While posing some limitations, the source of data must also be considered a strength in this study. Moreover, the use of two different types of registrations, both TULP and JDS, provides valuable insight in the characteristics of these registrations and sheds a light on differences between these data sources that could influence research outcomes.

Implications for practice and research

Several characteristics of emerging criminal careers of male youth offenders are indicative of a future career type. Especially minor and moderate violent offences registered as a first offence are indicative of membership to the violent, property/minor violent, and violent/arsonist offender types, which are the three classes with highest mean number an highest versatility of offences committed. This could possibly indicate lifetime-persistent offenders (Moffitt, 1993), therefore additional effort to promote desistence in these male adolescent offenders could be very beneficial to both the adolescents themselves and to society.

Additionally, future research should focus on extending the study of juvenile offenders in the Netherlands of native Dutch and Moroccan origin into adulthood, taking into account lifetime-persistent and adolescent-limited outcomes and study their predictors indisputably. In the current study a comparison is made between native Dutch offenders and those of Moroccan origin in types of offences committed and offender typology. Based on the overrepresentation of offenders of Moroccan origin in property related offences, combined with earlier findings of the relative short criminal careers of offenders of Moroccan origin (Gijsberts et al., 2012) it might easily be concluded that being of Moroccan origin is a predictor of having a short criminal career and, consequently, that being a native Dutch youth offender is a risk factor for a longer and more serious criminal career. This conclusion might

be too easily taken. In the current study, offenders of Moroccan origin do not show an overrepresentation in the property offender type, an offender type possibly indicative of adolescent-limited offenders. They, however, are younger at their first registered offence compared to native Dutch offenders, and show an overrepresentation in violent and property/minor violent offender types, which are characterized by offence versatility and high mean numbers of registered offences. According to Moffitt (1993), this is not characteristic for the adolescent-limited offender, but more similar to the lifetime-persistent offender type. These conflicting results could be explained by the finding of the current study, i.e. that offenders of Moroccan and native Dutch origin differ substantially from each other in their offending behavior. When these two ethnic groups are taken together in one latent class analysis, subtle indicators of different criminal pathways held by each of the two groups separately could be overruled by the presence of the other group. This could result in an inability to differentiate short and long term offender trajectories that might occur within youth offender populations of Moroccan or native Dutch origin. It is therefore suggested to study the criminal pathways and their predictors of both groups separately. The current sample however, is not large enough four separate analyses, therefore it is recommended to replicate this study using a larger sample of both native Dutch and Moroccan origin.

In the current study, SES proved to be of little influence on offending characteristics, tentatively supporting relative deprivation theory (Wortley, 2009). Future research must study the influence of relative deprivation on offender characteristics.

An important insight this study has provided is the large discrepancy in information provided by the TULP registrations and the JDS records. Researchers studying delinquent youth should be aware of these data source differences and their influences on the results obtained.

Concluding

Overall, it can be stated that offenders of Moroccan origin differ from those of native Dutch origin in substantial ways. This largely replicates our earlier finding, indicating robust findings that can be generalized across different sources of data.

SES holds limited influence on the types and categories of offences registered for the male adolescent offenders in this sample. An effect was found for property offences, in which registered offenders of Moroccan origin are of lowest SES compared to native Dutch property offenders and non-property offenders of both ethnicities. SES did not have an effect on offender type, age at first offence and type of first offence committed while this would be expected, eliminating social disorganization theory (Shaw & McKay, 1942) as an explanation. These findings instead support relative deprivation theory (Wortley, 2009), in which it is stated that the relative experience of deprivation holds more predictive value than the absolute deprivation of this state.

While the predictive value of types of first offences has been doubted (e.g. Sampson & Laub, 2005), the current study indicates predictive value of minor and moderate violence types of offenders as first registered offence of increased chances of belonging to offender types who have a high number of registered offences, possibly indicating life-time persistent offenders (Moffitt, 1993)

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