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Animal abuse: Offender and offence characteristics. A descriptive study

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Abstract

This descriptive study was done to gain insight into the characteristics of animal abusers and animal abuse. On the basis of registrations by police, animal protection services, and the national reporting centre for animal welfare, 90 cases of animal abuse involving 97 offenders were analysed. Information about the offence and the offenders could be retrieved; the group of offenders was heterogeneous as to background and characteristics. Many were in debt, and 25% had 1 or more psychological disorders (e.g., antisocial personality disorders and autism spectrum disorders). Animal abuse often occurred because of frustration, and dogs were the main victims. Most cases of abuse took place in the home of the abuser. By taking the offence of animal abuse as starting point for studying the offenders' characteristics, we gained insight into a broad spectrum of characteristics and backgrounds than would have been found if we had started from a domestic violence perspective or the graduation hypothesis. A larger study is needed to verify findings.

KEYWORDS

animal abuse, domestic violence, offender characteristics, progression hypotheses

1 | INTRODUCTION

Animal abuse is a worldwide problem and causes an incalculable degree of animal suffering (McMillan, Duffy, Zawistowski, & Serpell, 2015). Although abuse is an intentional act that causes harm to an individual (McMillan et al., 2015), a number of definitions of animal abuse have been proposed. One of the most often cited is Ascione's, 1993 definition: "socially unacceptable behavior that intentionally causes unnecessary pain, suffering, or distress to and/or the death of an animal." This includes, among others, kicking, throwing (against a wall, across a room, downstairs, out of a window, etc.), hitting (broom, hammer, etc.), burning, stabbing, incisional wounds, sexual abuse, administration of drugs or poison, and swinging by the tail (Munro & Thrusfield, 2001). The literature refers to these injuries as non-accidental injuries (NAI). According to Tallichet and Hensley (2005), shooting, hitting, and/or kicking animals

are the most common forms of abuse. Although not a NAI, sex with animals, bestiality, is also animal abuse (Arluke & Luke, 1997).

People have different motives for abusing animals, for example, curiosity, excitement, teasing, or desire to hurt (Arluke, 2002; Ascione, McCabe, Philips, & Tedeschi, 2010; Baldry, 2004; Dadds, Turner, & McAloon, 2002). Animal abuse may also be used to intimidate others, to control, to frighten, to isolate, to manipulate, to punish, to shock, to take revenge, or to emphasise prejudices; there may also be a sadistic, aggressive motive (Ascione, 2001; Dadds et al., 2002; Garnier & Enders-Slegers, 2012; Gullone, Johnson, & Volant, 2002; Ramsey, Randour, Blaney, & Gupta, 2010). In almost half of the cases, the reason to commit animal abuse is aggression, and in a third of the cases, it is pleasure (Hensley & Tallichet, 2005). Also feelings of humiliation and fear can play a part (Wright & Hensley, 2003). Power and control will mainly play a part when animal abuse takes place in the context of interpersonal violence (Ascione, Friedrich, Heath, & Hayashi, 2003). Seventy per cent of people who abuse animals have also committed other violent crimes (Ascione & Arkow, 1999).

Studies have shown that people who abuse animals have had negative experiences in childhood, for example, they have been the victim of and/or have seen interpersonal violence and/or animal abuse. These children are three times more likely to abuse animals than children who have not had similar experiences (Baldry, 2003; Baldry, 2005; Becker, Stuewig, Herrera, & McCloskey, 2004). The younger the child is when it has negative experiences, the younger it starts to abuse animals (Baldry, 2003; Baldry, 2005; Duncan, Thomas, & Miller, 2005; Hensley, Tallichet, & Dutkiewicz, 2012). Unfortunately, the opportunities for research are limited because relatively few cases of animal abuse are reported to the authorities, and so researchers have often had to work with convenience samples, such as prisoners who can be interviewed (Hensley et al., 2012; O'Grady, Kinlock,.& Hanlon, 2007).

Despite the suffering involved, there has been little research interest in animal abuse (Sinclair, Merck, & Lockwood, 2006). Yet Dutch media regularly report animal abuse. However, the incidence of animal abuse remains unclear, possibly because veterinarians find it difficult to recognise animal abuse and may be reluctant to report it to the authorities in the case of doubt, so as not to falsely accuse someone (Enders-Slegers & Janssens, 2009). Moreover, animal abuse is not a priority for police or health services. Many cases are under-reported or under-investigated, particularly in rural areas where Society for the Prevention of Cruelty to Animals of animal control agencies are still in place. So apart from the cases that are registered, there is probably a high "dark number" (Lockwood, 2010; Lockwood & Arkow, 2016). In the Netherlands, there have been no studies of the incidence and prevalence of animal abuse.

In the last decade, research has tended to focus on one of two aspects. One is about animal abuse and the link with interpersonal violence (Dadds et al., 2002; DeGue & Dilillo, 2009; Newberry, 2017). Animals often act as indicators of human health and welfare, as can be seen in the link between animal abuse, family, and social violence (Arkow, 1996; Ascione & Shapiro, 2009; Ascione et al., 2007; Jordan & Lem, 2014). There is significant evidence that people who mistreat and abuse animals show the same behaviour toward vulnerable people around them, such as children or older adults. The other aspect focuses on animal abuse as risk factor for other criminal activities, such as human trafficking, drugs, and dog fighting (Kalof & Taylor, 2007; Ragatz, Fremou, Thomas, & McCoy, 2009). Many convicted murderers have a history of animal abuse (Garcia Pinillos et al., 2016; O'Grady et al., 2007).

One of the theories about the relationship between animal abuse and interpersonal violence is known as the violence graduation hypothesis (Ascione, 2001). The graduation hypothesis has two postulates. The first states that animal cruelty precedes interpersonal aggression. The second states that "the effect of animal cruelty on subsequent offending is specific to violent forms of antisocial behavior" (Ascione, 2001). However, much of the evidence regarding the graduation hypothesis is anecdotal. The meta-analysis of Walters (2013) appeared to show a link between childhood animal cruelty and later criminal offending, but this link was not specific to violent offending. And "even if rather appealing, a lot of children who abuse animals do not become a (serial) killer" (Walters, 2013).

The deviance generalisation hypothesis offers an alternative and states that animal abuse is one component of a larger deviance construct (Arluke, Levin, Luke, & Ascione, 1999). Human and animal abuse may be linked throughout

the lifespan (Volant, Johnson, Gullone, & Coleman, 2008), and "individuals who commit one form of deviance are likely to commit other forms as well, and in no particular time order" (Arluke et al., 1999). It may be that an individual's propensity for maladaptive coping strategies in one setting (e.g., the use of aggression toward animals) is consistent in other settings (e.g., the use of aggression towards intimate partners; Febres et al., 2014). "Rather than being a predictor or a distinct step in the development of increasingly criminal or violent behavior, animal abuse is one of many antisocial behaviors committed by individuals in society" (Arluke et al., 1999). This theory puts more emphasis on what happens over a time period rather than what happens sequentially. Offenders of interpersonal violence and animal abuse show less affection, punish earlier, and have irrational expectations of animals (Carlisle-Frank, Frank, & Nielsen, 2004).

As stated above, it is very difficult to get an accurate picture of how often animal abuse is committed, how it is done, and by whom. Studies to date were often retrospective, based on self-report from male prisoners (Tallichet & Hensley, 2005). Major bias with retrospective cohort studies can impact the recall of former exposure to risk variables, and the temporal relationship is frequently difficult to assess (Sedgwick, 2014). Also, it is not possible to control exposure or outcome assessment, and researchers have to rely on participants for accurate record-keeping (Euser, Zocalli, Jager & Dekker, 2009). This is particularly problematic because it can be very difficult to make accurate comparisons between exposed and nonexposed individuals. Retrospective studies also may need very large sample sizes for rare outcomes (Kelsey, Petitti, & King, 1998). These studies make use of interviews, which are on a voluntary basis, which may also be biased, and response rates may be low. These problems make it difficult to generalise results.

In this study, we investigated animal abuse, using different sources of information, in order to acquire a more complete view of the characteristics of the act and of the offenders. The act of animal abuse is the starting point for this research and not the link with interpersonal violence or other (violent) crimes.

2 | MATERIALS AND METHODS

The Dutch criminal proceedings system differs from that of Anglo-Saxon countries, where there is the tradition of common law. In the Netherlands and other continental European countries, the criminal trial is characterised by its inquisitorial quality (Corstens, 2008). In common law countries, the criminal trial has an accusatory character. The main characteristic of an inquisitorial trial is its vertical structure. The Public Prosecutor does not appear for the victim but for the community. The judge's role is an active and truth-finding one, and he/she determines the progress of the trial. In contrast with an accusatory trial, in an inquisitorial trial, the investigation is carried out by the police under the supervision of the Public Prosecutor. The judge decides on the guilt of the defendant, not a jury. In an inquisitorial trial, the defendant is investigated, whereas in an accusatory trial, two equal parties (the defendant and the Public Prosecutor) are each other's opponents before a passive judge. Under certain conditions, and with formal permission from the Ministry of Justice and Security, information about the crime and the suspect can be made available for research. The Dutch Probation Service also need to give their approval if use is made of reports made by the Service. These reports are intended for use by the officer of justice and the judge and provide an overview of the suspect and his/her background that may need to be taken into consideration when determining the penalty. Both bodies gave their approval for this study.

In this descriptive study, we wanted to include a sufficiently large number of cases of animal abuse and offenders —about 100—to be able to answer our research questions. In the Netherlands, there is no national authority that registers cases of animal abuse and animal abusers, and for this reason, several sources of information were consulted. This mixed models approach has "the ability to move beyond the confines of existing methodological approaches and develop innovative solutions to important and complex problems" (Palinkas et al., 2015). The data were derived from the National Police, the National Inspectorate Animal Protection, the national reporting station ("Red een dier"), and the Dutch Probation Service.

2.1 | National Police

The National Police registration systems were searched for cases of animal abuse that took place from 2011 to 2014. We used different articles of law that cover animal welfare issues to search the databases and identified 1,143 possibly relevant cases, 500 of which we reviewed manually. Of these, 66 cases that involved abuse/NAI were included. Most of the reports registered in the police system concerned neglect or other animal-related cases but not abuse. The 66 cases selected contained sufficient information about the offence, and offenders' names were mentioned.

2.2 | National Inspectorate Animal Protection

The National Inspectorate Animal Protection (Landelijke Inspectiedienst Dierenbescherming, LID in Dutch) is for the protection of animals and for the prevention of animal suffering and abuse. The LID registers all reports of alleged disrupted animal welfare. It included 78 closed cases of animal abuse pertaining to the period studied (2011–2014). After we had reviewed the contents of these cases and checked them against the police systems, we removed 57 cases because it was not clear whether these involved abuse/NAI or because too little information was available. All in all, 21 LID cases were included in the study.

2.3 | National reporting station

The central, national reporting station that citizens can contact to report animal abuse and animal neglect is Reporting Station 144. There were no reports of abuse available in the research period. However, there were reports from part of 2015. These entailed all reports, including reports of cases relating to animal neglect as well as general questions concerning animal welfare.

Looking at the first 3 months of 2015, the search term of "animal abuse" produced 42 reports that seemed relevant to this study. These 42 reports were subsequently evaluated in the light of information available from the police. Three cases were included. In total, we had 90 cases of animal abuse (66 + 21 + 3). Three of these cases involved more than one person, and so there were 97 animal abusers. We searched the Dutch Probation Services for background information about these individuals and found information about 54 of the offenders. The other offenders were not mentioned in their files.

2.4 | Formats

We systematically collected information from the systems of the National Police, the National Inspectorate Animal Protection, and the national reporting station about the characteristics of the offence and the offenders' characteristics. Information about characteristics of the offence included which animal, ownership, modus operandi, location/area of the abuse, at what time the offence had taken place, and who had detected the animal abuse. Offender characteristics covered as many relevant details as possible in this study: family background, education, risky habits, job and income, social relations, criminal career, psychological functioning, psychopathology, and animal abuse. We adopted the terminology used in the files. For example, in the case of psychological disorders, we used the information provided in the files if the offender had undergone a psychological or psychiatric evaluation. The information with regard to criminal careers was based on existing police records.

3 | RESULTS

3.1 | Offender

3.1.1 | General characteristics

Eighty-six animal abusers were male (89%) and 11 female (11%). The average age of the men and women at the time of the animal abuse was 34 (range 7–78 years) and 36 (range 18–69 years) years, respectively. Overall, 34% of the

offenders were single, 8% were married, 5% were living together, and 5% lived with their parents; the marital status of the other offenders (46%) was unknown (Table A1). Most offenders (85%) had a Dutch background; other nationalities included Antillean, Bulgarian, German, and English. There were three group offences involving it total 10 men.

3.1.2 | Family

The files of the Dutch Probation Service in particular were searched for information about the animal abusers' family. In general, there was very little information about the offenders' family background. As far as known, 19 offenders were raised in single-parent families, and at least 12 came from abusive home situations (physical and/or sexual). The children either may have been the victims of violence or may have witnessed violence between the parents.

3.1.3 | Education

Information about education was known for 49% of the offenders. The largest group (26%) had secondary vocational training, and 12% had attended a school for lower secondary education. Five animal abusers had attended (secondary) schools for pupils with special needs. Two offenders had attended a school for higher vocational education or went to university.

3.1.4 | Risk behaviour

At least 14% of the case files mentioned (probable) addiction to alcohol and 10% addiction to drugs (soft drugs).

3.1.5 | Work and income

Forty per cent of the offenders were unemployed, 21% had a steady job, and 9% had various, temporary jobs; there was no information on the other offenders.

Nine offenders (9%) did not have financial problems, even though their income was not very high or they derived an income from criminal activities. The financial situation of 39 offenders (40%) was less positive—they had debts ranging from a couple of thousands of Euros to tens of thousands of Euros. They had incurred debts with, for example, health insurance companies, telephone companies, the social benefits authority, the inland revenue service, a housing corporation, and the central judicial debt-collection agency (fines not paid). Several offenders were subjected to a debt-restructuring plan and had a financial supervisor who provided them with a small, weekly allowance. There was no information on the other offenders.

3.1.6 | Social relations

Nineteen per cent of the offenders had contacts with persons with a criminal background. There was no information about the other offenders.

3.1.7 | Animal abuse

Abuse was unplanned, "spontaneous" in 52% of the cases. Sometimes, drugs and/or alcohol were involved. The abuse was often a reaction to a certain situation that was frustrating or annoying to the suspect, whereupon he/she took it out on the animal. Twenty-five cases (26%) appeared to involve a certain amount of premeditation to (continue to) abuse the animal. It could not be determined whether the remaining cases (22%) involved planned or impulsive actions.

The motives for animal abuse varied. Ten offenders (10%) indicated that they wanted to give vent to their own frustration or anger, six mistreated the animal because they did not want to take care of it anymore, five were motivated by reasons having to do with abuse of power or sadism, and two had a preference for sex with animals.

Twenty-four per cent of the abusers denied having committed the offence, yet almost a third (30%) indicated that they felt responsible for what they had done. Ten per cent explicitly said that they did not feel any responsibility at all. The records did not contain data concerning the remaining offenders.

3.1.8 | Criminal career

Offenders were 24.4 years old on average when they were first registered in the police system. Fifty-one per cent had not committed any other offences beside animal abuse (first offenders). The criminal career lasted 6.5 years on average. The average number of police registrations was 4.4 (standard deviation 6.9). The criminal offences included crimes against property (34%), violent crimes (23%), vandalism (11%), and other offences (22%), for example, traffic offences. Only 10% of the registrations concerned domestic violence.

With the *graduation hypothesis* in mind, we looked into the timeline of the animal abuse with regard to the other offences. The average age at the time of registration for animal abuse was 34 years. This means that the offender's criminal career started with another criminal offence before he/she committed animal abuse. On average, animal abuse was committed (registered) just over halfway of the offender's criminal career.

3.1.9 | Psychological functioning

The Dutch Probation Service files contained hardly any information concerning the psychological functioning of the offenders. Psychological functioning included the following subjects: mental handicap, aggression control, empathy, function of conscience, social skills, and feelings of depression (see Table A2).

3.1.10 | Psychopathology

The files were also searched for information concerning Diagnostic and Statistical Manual of Mental Disorders IV psychological and psychiatric diagnoses. This concerned both disorders and signs of psychological distress (Table A3). One or more diagnoses were known for 24% of the offenders. There were (various) personality disorders and depressions as well as autism spectrum disorders (Asperger, pervasive developmental disorder not otherwise specified, and autism).

3.2 | Offence

3.2.1 | Animals

Seventy-nine per cent of the animals abused were companion animals. Three times as many dogs as cats were abused. Relatively few (8%) farm animals (horses and ponies) were abused. Approximately 13% of the animals abused lived in the wild, for example, ducks and pigeons.

3.2.2 | Ownership

Almost half of the cases studied (47%) concerned the offender's own animal. The remaining cases concerned someone else's animal or wild animals. The category "other people's animal" included four cases in which the abuser had mistreated his (ex) girlfriend's animal.

3.2.3 | Modus operandi

The police registers were searched to determine how an animal was abused (Table A4). In many cases, the cause of the injury could not be ascertained—the veterinarian could only conclude that the animal had sustained injuries due to (multiple) abuse. The remaining cases included, for example, setting fire to the animal or drowning it. Forty-three per cent of the abused animals died as a result of the abuse (directly or euthanasia). In at least 33 cases (36%), a weapon or some other aid was used. "At least" because it was not always clear what had caused the injuries. Weapons included a firearm/air pressure gun (six times), screwdriver, knife, stone, compasses, bottle, rake, and whip. Examples of aids are boiling water, turpentine, and bleach.

3.2.4 | Location/area

Nearly half of the cases (44%) occurred in the owner's home, 39% occurred in the public domain (street, near a pond, in a field, or in the entrance of a block of flats), and the other cases took place in someone else's house. Almost half of the cases (45%) for which data were available took place in urban areas and 23% in rural areas; the location was not clear in the remaining cases.

3.2.5 | Month/day/time

The animal abuse offences occurred in July and August in particular and mainly occurred on Sundays (29%). Overall, 26% of the abuse occurred in the afternoon (12–18 hr), 19% in the evening (18–24 hr), and 14% at night (24–06 hr).

3.2.6 | Social environment

In most cases (39%), the abuse had been seen by the social environment, that is, neighbours and other people living in the neighbourhood, followed by the owners of the abused animals (19%) or friends or family (13%). The remaining cases were reported by, for example, passers-by, teachers, and veterinarians.

4 | DISCUSSION

This is the first descriptive study of the background and characteristics of animal abuse and of the people who abuse animals in the Netherlands. Information about a large number of animal abusers (N = 97) was collected from various sources. Even so, it was not very easy to gather data, and the sources contained little information about the offender's family, education, risky habits, and psychopathology. Nothing was known about the motive for abuse in 49% of the cases. This was partly because a number of animal abusers denied the offence when confronted with it by the police. There were two other limitations in this descriptive study. First, there were missing data for "living areas," so it was impossible to develop typologies of offenders in which the offence and offender traits could be linked in a statistically responsible way. Second, we obtained information about registered cases, and we can assume that considerably more cases go unreported. Moreover, as these were registered cases, determining the time order of the offences during an offender's criminal career could be an artefact of the registrations.

Despite these limitations, findings reveal that animal abusers form a heterogeneous group. The research method selected prevents that only one specific group of offenders is studied. Because we focused on animal abuse, we gained a broader perspective of the problem than in other studies, in which animal abuse was considered a minor subject in the study of domestic violence and in the graduation hypothesis. The two major research domains (domestic violence and graduation hypothesis) have in common that they do not consider animal abuse to be a punishable deed in itself that justifies a separate study into the matter but consider animal abuse as being dependent (correlatively and causally) on and subordinate to other types of misbehaving. The consequence may be that certain groups of offenders remain invisible. This study found that only 10% of animal abusers had also committed acts of domestic violence. So the vast majority had not. To identify animal abuse correctly, it is vital to look beyond the context of domestic violence only.

On the basis of our data, we can conclude that animal abuse is not a marker of later, serious criminal behaviour but instead takes place halfway through the offender's criminal career. This is in line with various other authors who are in favour of redefining the graduation hypothesis (Arluke et al., 1999; Beirne, 2004; Walters, 2013). Gullone (2011) thinks that we should not regard animal abuse as a separate kind of behaviour, but rather as one type of anti-social and aggressive behaviour a person may display. O'Grady et al. (2007) found that a history, so not a single event, of torturing animals as a child is predictive of committing murder. And there is scientific evidence connecting animal abuse to other forms of violence (Flynn, 2011). By focusing on animal abuse rather than interpersonal abuse, we gained a more differentiated picture of offenders, their background and characteristics, than if animal abuse was to

be considered as part of interpersonal abuse. There is always the danger that interpersonal violence overshadows animal abuse, so that the latter is often not reported or registered (Arluke & Luke, 1997).

About half of the animal abusers did not commit any other offences. The average age at the time of the first offence (24 years) suggested that the offenders were not part of the group of notorious offenders. The percentage of offenders with violent antecedents (23%) was low compared with that (65%) reported by Hensley, Tallichet, and Dutkiewicz (2010) and Ascione et al. (1999) (70%). This is potentially consistent with the finding that many cases were about impulsive actions and manifestations of frustration, with the animal being "available" at that moment. This could also explain why dogs were the main victims and why most cases of abuse happened on a Sunday, when most people are at home and not at work.

Overall, 25% of the offenders were diagnosed with one or more psychological disorders. This percentage was somewhat lower than that reported by Gleyzer, Felthous, and Holzer (2002). They studied 48 convicts who had committed animal abuse at one time and 48 convicts who had never committed animal abuse. They concluded that an anti-personality disorder was significantly more common in animal abusers (37.5%) than in the control group (8.3%). An explanation could be that the research group in the study in question was not made up of "serious delinquents" and therefore could possibly be included in the antisocial group to a lesser extent, or, seeing the number of pervasive developmental disorder-related problems, to the less "visible" problem group.

It is striking that 10% of offenders were women, who are generally perceived as being caring and nurturing. Yet women also commit serious offences, such as sexual offences and domestic violence (Van der Knaap, Idrissi, & Bogaerts, 2010; Wijkman, 2014). Much research, however, is based on official records. Research among offenders who were found guilty of domestic violence and who were included in the Dutch Probation Service programs showed that 7% of offenders were women. A self-report study of the general Dutch population showed that around 60% of offenders is female (Van der Knaap et al., 2010). This discrepancy, which may be caused by a variety of factors, feeds the assumption that the role of females in animal abuse is under-reported.

The animal abuse characteristics we detected are consistent with those reported in the literature. Especially, the finding that abuse can take place with multiple offenders. Group criminality is pre-eminently a characteristic of youth delinquency (Warr, 2002). The group offenders in this study were adolescents. Group animal abuse may be the result of group dynamic processes but may also be a sign of criminal behaviour later in life. More research into animal abuse by groups of youths and what this means with regard to committing serious crimes at a later age is called for, especially because Burchfield (2017) found that juveniles arrested for animal crimes tended to commit more severe animal crimes than adult offenders.

5 | CONCLUSION

This research shows that *the* animal abuse offender does not exist. It is about men and women of all ages. This study was not limited to the two main trends in which research has been conducted so far: (a) animal abuse in relation to other violence and (b) animal abuse as a predictor for later, serious criminal behaviour. The general deviating hypothesis seems more likely based on these results and deserves further research with, among other things, larger populations of animal abusers.

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APPENDIX A

Table A1. Mean marital status the time of the offence

Marital status	Total		Man		Woman	
	N	%	n	%	n	%
Single	33	34	31	36	2	18
Married	8	8	7	8	1	9
Living together	5	5	5	6	0	0
Living with parents	4	4	4	5	0	0
Widower	2	2	2	2	0	0
Unknown	45	46	37	43	8	73
Total	97	100	86	100	11	100

Table A2. Psychic problems

	n	%
Mental disability	14	14
Aggression regulation problems	35	36
Empathy deficit problems	8	8
Moodiness	16	16
Welfare assistance	33	34
Impulse control problems	17	18
Lack of conscience	7	7
Lack of social skills	22	23

Table A3. Psychopathology

Disorder	n	%
Depressive disorder	4	4
Borderline personality disorder	1	1
Narcissistic personality disorder	1	1
Dependent personality disorder	1	1
Mental handicap and antisocial personality disorder	2	2
Antisocial personality disorder	2	2
Antisocial personality disorder and alcohol dependence	1	1
PDD	5	5
PDD, behavioural disorder, suspicion of sexual sadism	1	1
Mental handicap	1	1
ADHD	2	2
ADHD, PDD, and depressive disorder	1	1
Alcohol dependence	1	1
No information	74	76
In total	97	100

Note. PDD = pervasive developmental disorder; ADHD = attention deficit hyperactivity disorder.

Table A4. Modus operandi

	n	%
Hit/kick/throwing	28	31
Shoot	6	7
Sexual	5	6
Strangulation/poisoning	5	6
Hit with object	4	4
Fire	2	2
Stab	2	2
Drown	2	2
Run over	1	1
Cut-off tail or mane	1	1
Unclear	34	38
Total	90	100