CHILDREN OF ALCOHOLICS
A SYSTEMATIC REVIEW ON THE CORRELATION BETWEEN PARENTAL ALCOHOLISM AND YOUTH CRIMINALITY

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Abstract: Prior research indicates a growing number of Children of Alcoholics (CoAs) in Sweden, and increased levels of externalizing behaviours in these individuals. According to international research, externalizing behaviours as criminality are more often displayed in CoAs than children with non-alcoholic parents. CoAs are also more often treated for panic attacks, depression and post-traumatic stress. The assumption is that high risk parents often have high risk children. With the aim to investigate the relationship between parental alcoholism and youth criminality in Sweden a systematic literature review has been conducted. Five databases were used to find relevant publications; Libsearch, Swesub, Eric via Ebsco, ProQuest and Google Scholar. A total of 530 texts were scanned and 17 studies eligible to inclusion were read and analysed according to PRISMA, a preferred reporting system of literature reviews. Inclusion criterions were; Sweden as geographical area, attention on children and young adults aged 13-25 years and a focus on parental drinking and youth criminality. The publications were also to be peer reviewed and published between 1998 and 2018. Results indicate a significant correlation between parental drinking and youth criminality in Sweden. CoAs display externalizing behaviours as aggression, conduct disorders, antisocial behaviour and criminality more often than children without alcoholic parents. It can be concluded that research on the field of CoAs is not the most researched in Sweden but in line with international findings and would benefit from further attention so we in the future can work with preventive measures based on solid knowledge.

Keywords: Children of alcoholics, youth criminality, offspring deviance, Alcohol Use Disorder.
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ABBREVIATIONS

ASB – Anti-Social Behaviour
AUD – Alcohol Use Disorder
BrB – Brottsbalk (1962:700) (The Swedish Penal Code)
CB – Criminal Behaviour
CoAs – Children of Alcoholics
DSM – Diagnostic and Statistical Manual of mental disorders
DUD – Drug Use Disorder
LUL – lagen (1964:67) med särskilda bestämmelser om unga lagöverträdare (Act (1964: 67) with special provisions on young people)
NCADD – The Central Association for Alcohol- and Drug information
OR – Odds Ratio
PHAS – The Public Health Agency of Sweden
SNCCP – The Swedish National Council for Crime Prevention
SUD – Substance Use Disorder
1 INTRODUCTION

Traditionally, significant attention has been given to how the society should help alcoholics and how to prevent the harms they often cause themselves and others. On the contrary, little attention has been given to how relatives to alcoholics are affected (Rossow, Felix, Keating & McCambridge, 2016). Children of alcoholics (CoAs) have been mentioned as one of the most vulnerable group of relatives, since they are dependent on their parents for their welfare (Runquist, 1998). This means that in some cases where there is no responsible parent, children are left out to the grown-up world and its arbitrariness (Runquist, 1998). It is estimated that about 20% of all children in Sweden live in a family with alcohol problems (Elgán & Leifman, 2013; Larm, 2017; Ljungdahl, 2008).

As organisations and policy makers have realized the great amount of costs alcoholism causes the society, preventing addiction has become crucial. It is challenging to estimate these costs, since many variables are affected, for example absence from work due to illness, medical treatments, destruction of property and early retirement (The Public Health Agency of Sweden (PHAS), 2019). It was calculated in 2011 that the Swedish economy spend between 49 to 66 billion\(^1\) each year only on alcohol misuse (PHAS, 2019). According to the World Health Organization (2011) alcohol is the world's third biggest priority area in public health, after unsafe sex and low birth weight, and the leading cause of ill health. Parental alcoholism is according to Chassin, Pitts, DeLucia & Todd (1999) a well-established factor for adult alcoholism in CoAs. At times it has been argued that alcoholism is a private family matter and should therefore not be problematized (Mortensen, 1995). It has become evident that this no longer is the case as the subject has continued to be discussed in research, and a larger interest in how to help both abusers and their relatives now exist. Being a child of an alcoholic often means being dragged into a life of lies, something which could disturb adolescents’ behaviours and choices later in life (Pousette, 1996). Besides having a childhood imprinted with lies, disappointment and concern due to parental alcohol misuse, it is often also imprinted with feelings of pain and anger (Farrington, 1996).

In 1993, Terrie E. Moffitt wrote the original text of the today well known “Age Crime Curve”, which aims to explain why teenagers and young adults commit a large amount of crimes. Moffitt explains how she believes that temporary and situational antisocial behaviour is a common entity particularly among adolescents. Many of whom are constituting the adolescence criminal group do so with a short duration as most criminal offenders are teenagers which off 50% desist from offending in the early 20s (Moffitt, 1993). According to the curve presented in her work, a clear peak in delinquency is visible at the age of 17 and drops shortly thereafter when entering young adulthood\(^2\). Since rates of illegal behaviours often are very high during adolescence it appears as delinquency is part of teen life (Moffitt, 1993). Consequently, puberty is often used as an explanation to problem behaviour in adolescence (Skoog, 2008). Hence it is of high importance to study how parental alcoholism affects behavioural problems in adolescences and research if this also is an explanation to youth criminality.

\(^1\) Depending on which variables that are included in the calculation.

\(^2\) In her findings she unfortunately only included male offenders’ statistics.
1.1 Aim & significance

The potential long-term harms children can attain due to parental hazardous drinking, prove the importance of working with alcoholism and the harms it causes (Commentary on Berg et al., 2016). The youth generation is the future providers and keepers of the society, and therefore it becomes specifically important to map juvenile delinquency and early criminal pathways, to prevent future social problems in the community (Estrada, 2007). This paper is therefore designed to systematically map out research on the correlation between having alcoholic parents and youth criminality in Sweden. The aim is to provide knowledge about whether this hypothetical link between youth criminality and having alcoholic parents is accurate. This paper will not discuss or compare the diversity of risk factors of delinquency but rather improve the knowledge base about children of alcoholics in Sweden. Following research questions has therefore been formulated;

- Can youth criminality be explained by parental alcoholism?
- Does parental drinking cause emotional and behavioural problems in Swedish juveniles?

1.2 Definitions

The phrase *Youth Criminality* will be frequently used in this paper, referring to boys and girls aged 13 to 25 years, who commit unlawful acts. The chosen ages are based on prior research and the age they often tend to focus on. A focus on younger children would open for a bigger discussion as it would be necessary to involve a debate on child maternity and parenting in a wider extension than what fits in this paper. Terms as teenager, child, youngster, young adult and adolescent will also be used when referring to individuals displaying delinquencies between the abovementioned ages (Estrada & Flyghed, 2007). The term *delinquency* is used to explain externalizing behaviours in youth, specifically physical or verbal behaviours that might harm others (Juvenile delinquency, 2019). This denotes all acts which are criminalized in accordance to Swedish criminal law (Brottsbalken (1962:700) (BrB)). In Sweden a juvenile delinquent is typically an individual that has not entered adulthood and tuned 18 (9 kap. 1 § Föräldrabalken).

An often-reoccurring term is *Children of Alcoholics* (CoAs), which basically refers to children having parents with an alcohol *addiction*. The Swedish National Board of Health and Welfare argues that an addiction is not defined by the quantity used but instead the habitational patterns, motivation behind the use and the consequences it creates. Substance abuse might hence lead to addiction (Järkestig Berggren & Hanson, 2016). Whether or not an individual is drinking for social comfort or because it is a need, it could be defined in different ways (Hansen, 1994).

Within the field of psychiatry for example, *Diagnostic and statistical manual of mental disorders (DSM 5)* is used as a measurement (The National Board of Health and Welfare, 2019). In DSM 5 the terms used is ‘Alcohol use disorder’ (AUD), ‘drug use disorder’ (DUD) and ‘substance use disorder’ (SUD). SUD is an accumulation of AUD and DUD. A commonly used term in Sweden is ‘Riskbruk’ which could be translated to ‘hazardous use’, note that this is not a diagnosis but is defined as a high average consumption (Andréasson & Allebeck, 2005). Hence,
the term AUD will be used when discussing alcoholism together with the expression hazardous use of alcohol. SUD will be used at some points were DUD and AUD are not separated as individual risk factors. When discussing CoAs, it refers to children of alcoholics, or in other words children of parents with an AUD or hazardous alcohol consumption. Parental SUD will not only be discussed in general terms but also specifically maternal and paternal SUD, meaning motherly respectively fatherly SUD.

2 PREVIOUS RESEARCH

In the following chapter findings within this field of research will be presented as well as assessments on the amount of CoAs that live in Sweden. It will be presented how these children are affected by parental alcoholism and how Swedish legislation handle youth crimes.

2.1 Swedish legislation

According to the Swedish law, children below the age of 15 does not have criminal liability, meaning that an individual who has not turned 15 cannot be held responsible for his actions (The Swedish National Council for Crime Prevention (SNCCP), 2014; BrB, I Chap. 6§). When the police receive a report of a child under 15 committing a crime, police investigations are rarely initiated, instead the social services are notified and become responsible for taking decisions about possible interventions (SNCCP, 2014). This investigation is called a § 31-investigation, referring to § 31 in the law (1964:67) with special provisions on young offenders (LUL).³

It is reported that 14 420 crime reports in 2005 were solved due to the perpetrator being under 15, a number which had diminished with 27% in 2012. It is important to mention that SNCCP estimates 15% of these crimes being written off with other reasons like “Crime cannot be proved” (SNCCP, 2014). According to Statistics Sweden (2019a; 2019b) the number of children within the age group of 11-14 (which they use in the report), had lowered 18% from 2005 to 2012⁴, hence the decline in crimes become less substantial. When turning 18 years old, individuals in Sweden are judicially defined as adults (16 chap. 10a § BrB). If committing a crime, positive treatment can be applied until the age of 21, meaning an easier punishment will be presented. (Nordlöf, 2012).

2.2 Historical development

CoAs have for quite some time been a subject of general discussions and have been labelled ‘the forgotten children’ and ‘wall-paper children’ in literature, referring to how they often are missed, neglected and hidden in the society (Mortensen, 1995; Runquist, 1998). Prior research on this subject, has often focused on how parental drinking behaviours are inherited by offspring. During the last couple of years, a growing interest in causal effects of parental alcoholism has increased internationally and a larger focus now lies in potential externalizing behaviours in CoAs (Rossow, Felix, Keating & McCambridge, 2016). In the late 1970s studies conducted by diverse researchers like Robins, West & Herjanic

³ In Swedish; 31 § i lagen (1964:67) med särskilda bestämmelser om unga lagöverträdare (LUL).
began to look further at the relationship between parent – child arrests, as it was found that arrested boys often had fathers with multiple arrests as well (Farrington, 1996; Robins, West and Herjanic, 1975). Some literature has since demonstrated that parental drinking is associated with more arrests and substance misuse in offspring (Rossow, Felix, Keating & McCambridge, 2015).

The very first study found on this specific subject is from 1936, a longitudinal study where 253 boys from families in Massachusetts were randomly selected for a study aiming at assessing long-term effects of child abuse and neglect. The boys were between five and nine years old at start and were followed until their late forties. The study measured how the boys reacted behaviour wise to having an alcoholic father (McCord, Farrington & Sayre-McCord, 2007). It was measured that fathers were alcoholic if the i) their repeated drunkenness had caused them to lose a job or caused marital problems and if they had been arrested more than three times or been treated for alcoholism or a related physical disease (McCord, Farrington & Sayre-McCord, 2007).

It was found that 48n of these boys had been rejected at home of which 50% had during adolescence been convicted for serious crimes such as theft, auto theft, breaking and entering, burglary, or assault. Of 48n neglected and 49n abused boys approximately 20% respectively had been convicted for some type of serious juvenile crime (McCord, Farrington & Sayre-McCord, 2007). The researchers concluded that boys having alcoholic fathers who treated them badly by rejection, neglect and assault were at higher risk for youth criminality compared to boys who had been loved during adolescence. Even though this study is outdated, it gives some indications of how the problem might be distributed.

2.3 Children of alcoholics

Life situation for CoAs can vary, some have one alcoholic parent and others have two, parents can live together or be separated. Some alcoholic parents have antisocial behaviour problems and others have social lives just like other everyday parents (Poon, Ellis, Fitzgerald & Zucker, 2000). These adversities can make important differences and it has been argued that having one parent without alcohol problems within the household can offer protection against negative outcomes in the offspring (Foxcroft & Lowe, 1991; Long, Lönn, Sundquist, Sunquist & Kendler, 2018). It is important to keep in mind that amongst the children whose parents are addicted to a substance, the risk for negative outcomes are very different. There are many more risk factors which might affect, and the risk is for example higher if a parent also has a psychiatric disorder (Hussong, Flora, Curran, Chassin & Zucker, 2018; Solis, Shadur & Burns 2012). It is just as well important to recognize that many CoAs show positive outcomes even though there are high risks for the opposite outcome (Solis, Shadur & Burns 2012).

2.3.1 Children of alcoholics in Sweden

In a Swedish register-based study from 2013 it was estimated that of all children born between 1987 and 1989, about 2.5% had at least one parent who had been treated for an AUD and another 1.5% for DUD. Many more indicated SUD problems of a milder degree (Hjern & Adelino Manhica, 2013). If including parents who had got outpatient help from an institution or hospital for SUD and those who had been convicted for driving drunk or using narcotics the number adds up to 17% that had grown up with at least one parent with an SUD related problem (Hjern & Adelino Manhica, 2013). In 1995 approximately 175 000-
200 000 Swedish children lived with at least one parent with alcohol problems (Hansen, 1995). In 1998 it was further estimated that in the countries within the European union (together with Norway) between 6.8 and 11.7% of children below the age of 15 lived in a family with alcohol misuse (McNeill, 1998).

In a report from the Swedish Council for Information on Alcohol and Other Drugs (NCADD) results show that about 20% of all children in Sweden live in a family where at least one parent has a risky alcohol consumption (Elgán & Leifman, 2013). Findings from different Swedish surveys and studies confirm this 20% estimation (Elgán, Hansson, Zetterlind, Kartengren & Leifman 2012; Larm, 2017; Ljungdahl, 2008; Raninen, Elgán, H. Sundin & Ramstedt, 2016). Larm (2017) also reports that it is evident that these children use far more substances themselves compared to children without alcoholic parents. Alcohol misuse in adolescents has shown to be highly correlated with mental and psychiatric disorders, convictions for crime, poverty and premature death (Hodgins, Lövenhag, Rehn & W. Nilsson, 2013).

2.4 Externalizing behaviours in CoAs

Pousette (1996) argues that there are four characters that children of alcoholics often take on in their role as a child to an alcoholic; The good hero, the class clown, the silent one and the disorderly rebel.

Pousette wrote this in 1996 which is quite some time ago but already at this time she could argue that boys, as CoAs, often become the clowns or rebels and the girls become the good or silent characters. These personality types are often developed very early in an attempt of the child to adapt to the tough situation he/she is living in. The child who takes on the role as a rebel – for any reason – often continues later in life to be the troublemaker and will most likely conduct non-sanctioned or illegal acts (Seixas & Youcha, 1990). Runquist (1998) argues as well, that even if these children are trying to adapt, they still have a blasting fuse that could burst at any time. Hence, one could claim that for some children, growing up with an abusing parent means an interrupted childhood and stop in development, as it is needed to take on a parent-child role (Runquist, 1998). CoAs often share characteristics as anxiety, depression, bad self-image, behaviour disorders, problems in school, sleeping problems, aggression and criminality (Hussong, Flora, Curran, Chassin & Zucker, 2008; Mortensen, 1995; Solis, Shadur & Burns 2012). In the United States it was found that by young adulthood, mood disorders were almost twice as common for CoAs compared to their peers (Chassin, Pitts, DeLucia & Todd, 1999). It is also argued that these children learn not to trust others and specifically adults since their own parents often cannot be trusted. Missing out on having a parental role model can possibly also result in future problems with taking reasonable decisions and express one’s feelings (Mortensen, 1995). It is not uncommon that these children believe it is necessary to make risk assessments of adults’ trustworthiness before trust can be gained (Tinnfält, Eriksson & Brunnberg, 2011).

In a literature review conducted by McAdams et al., (2014) it is visible that parental alcoholism is becoming a more well-known risk factors for a host of negative outcomes in offspring. Their review which include publications from different continents prove that CoAs are at greater risk for externalizing behaviours compared to children without this moderate genetic risk (McAdams, Neiderheser, Rijsdijk, Narusyte, Lichtenstein & Eley (2014). An official report
from the Swedish Government (SOU 2005:25 Appendix 8) states that growing up in a family with issues such as substance misuse, often results in financial problems, weak social network, psychological issues and criminality in adult life (SOU 2005:25, Appendix 8).

The Central Association for Alcohol- and drug information (NCADD) reported that as children grow up the problems increase and between the ages 7-17 the risk to display problem behaviours is twice as high as for 2-7-year olds (Rainen & Leifman, 2014). In one of their reports (nr. 143) it is presented that CoAs have 30% lower chance to get into problems compared to children living with parents that have mixed drug problems (Rainen & Leifman, 2014). Boys also indicate having more problems than girls (El-Khouri, Sundell & Strandberg, 2005). SNCCP continuously make comparisons and evaluations of crime statistics, and what they have seen in multiple reports is that some more boys are reported committing crimes than girls, and they specifically argue that it is a very low percentage of heavy crimes that are committed by girls (SNCCP, 2014).

Mortensen (1995) argues that the changes that becomes visible in a parent’s behaviours and choices while abusing is frightening for many children and makes it more difficult for them to organize and understand their surroundings that usually are predictable and safe. If a child witnesses these situations repeatedly, it is not uncommon for this child to become more and more suspicious to other people, and the risk for psychiatric problems increases. (Hansen, 1995). Often when children are living in a family with alcohol abuse, they create an own fantasy world in their heads, as an attempt to block out all the misery that exists in the real world (Seixas & Youcha 1990). As these children grow up to adults and realize that this fantasy world is not real it could result in psychological issues and adult behavioural problems (Christensen & Bilenberg, 2000; Seixas & Youcha 1990). An alternative consequent could also be inhabitation of problems with overreacting in normal trifling situations and feelings of standing outside the normal society (Hansen, 1995). Often as the consumption of alcohol increase in parents the problems increase for children, and it becomes more difficult with adapting to changes (Hansen, 1995).

Family condition creates the foundation of what children continue building on during life, hence it matters how the family functions to explain the intellectual and social skills a child possesses (Martens, 1992; Salihovic, Özdemir & Kerr, 2013). Therefore, family explains some juveniles deviating behaviours and criminal choices (Nordlöf, 2012). Socio-psychological factors explain the character of the familial relationships, meaning the relationship between child and parent (Martens, 1992). David P. Farrington (1996) argues that family influences are one of the most important risk factors (together with peer influences and school factors) for antisocial behaviour and youthful offending. Others has also argued that parental neglect has the largest impact on crime of different factors of family socialization (Loeber and Stouthamer-Loeber, 1986; Nordlöf, 2012).

The Research and Development unit of Stockholm’s state management office (FoU-Report 2005:17) released a report in 2005 with some interesting facts. In the report they conducted a research review on risk factors which increase the likelihood of alcohol, drugs and narcotic consumption and criminality (El-Khouri, Sundell & Strandberg, 2005). This review included wide world results, by which it could be noted that there are two paths for developing antisocial and criminal
lifestyles. These two paths – who looks the same for both girls and boys – starts as a “Childhood-onset” for some and “Adolescence-onset” for others (El-Khoury, Sundell & Strandberg, 2005). A childhood-onset is characterised by weak structures and rules which often relates in weak parent-child relationships. This could result in children missing out on learning good and positive behaviours. The authors argue that early antisocial behaviours often lead to adult antisocial and criminal behaviours (El-Khoury, Sundell & Strandberg, 2005). The prognosis for adolescence-onset individuals is somewhat better. Early puberty, physical and sexual abuse are however risk factors for girls. In general, family risk factors for juvenile delinquency found in the review were; deficits in concern and supervision and antisocial behaviours in parents, alcohol- or drug misuse, criminality and physical punishment (El-Khoury, Sundell & Strandberg, 2005; Leve & Chamberlain, 2002; McCabe, Lansing, Garland, Hough, 2002).

3 METHOD AND MATERIAL

This systematic review will be conducted pursuant to PRISMA, a preferred reporting guide for systematic reviews within the field of research. Below it is explained how a systematic literature review is conducted, what material is used and how it was found.

3.1 Literature review

A literature review gives access to information already known within a specific field of research, commonly used terms and arguments as well as how results have been attained (Bryman, 2018; Liberati et al., 2009). Through a literature review debates and disagreements within a field can be accessed and further studied on. A literature review gathers spread contributions within research fields and map relevant contributions (Hart, 1998) and further helps develop the knowledge base and a better understanding of the field (Tranfield, Denyer & Smart, 2003). Reviews also help researchers narrowing down a topic and develop new questions to add originality. (Tranfield, Denyer & Smart, 2003).

3.1.1 Systematic literature review

During the 1980s critics argued that when reviews of secondary sources were conducted, they were dependent on individual interpretations and idiosyncratic methods of data (Tranfield, Denyer & Smart, 2003). The movement towards more corrects studies being carried out brought with it a doubt on existing research making many researchers amendable to change direction of how reviews were to be conducted (Tranfield, Denyer & Smart, 2003).

The idea is that a systematic review should be transparent and reproducible meaning that someone else should without any issues be able to conduct the same review and find equal results (Tranfield, Denyer & Smart, 2003). This becomes possible only when a detailed approach or also called technology is practiced. This means exhaustive literature searches of both published and unpublished studies, and in this way provide an audit trail of the decisions, inclusion/exclusion of material and decisions taken (Tranfield, Denyer & Smart, 2003). The advantage of conducting a systematic review is that it is more rigor and strictly conducted than more common narrative reviews, which often is criticized for not being thorough enough. This also means that systematic reviews are not as easily biased
by authors compared to narrative reviews (Bryman, 2018; Tranfield, Denyer & Smart, 2003). Systematic reviews have therefore been argued to provide the most efficient and high-quality method for identifying and evaluating extensive literatures (Mulrow, 1994).

3.1.2 PRISMA
To establish transparency and reproducibility as described above, PRISMA will be used. PRISMA stands for ‘Preferred Reporting Items for Systematic Reviews and Meta-Analyses’ and comprises of an evidence-based set of items for reporting in systematic reviews and meta-analyses (Glasgow Caledonian University (GCU), 2019). The systematic literature review will be conducted and reported according to the PRISMA statement (Moher, Liberati, Tetzlaff, Altman & the PRISMA group, 2009), which is a tool aimed at helping authors and researchers improve reporting of systematic reviews and meta-analyses. A summary of the process of gathering data is illustrated accordingly to PRISMA flow-chart in the ‘Material’ section, which map out how the collection of data has occurred, illustrated through a four-phase flow diagram (GCU, 2019). This tool makes it possible to present line of action to how the final literature was located. See Appendix II for PRISMA Checklist, a 27-item checklist (GCU, 2019).

3.2 Material
In this paper, secondary peer reviewed publications play the key role in the analysis. Books, anthologies and reports help establish previous research and background. The literature review will mainly consist of original articles but also commentaries.

Four electronic databases have been searched to find the secondary data for the analysis. Libsearch, ProQuest, Eric via Ebsco and SwePub. As this systematic literature review focus on Sweden, the database SwePub was included to find specifically Swedish data. These different databases have been used based on the goal to find as much relevant literature as possible. Using fewer databases would possibly result in a limited amount of results. The Malmö University library was used to find relevant books and anthologies which has formed prior research and background. The information found in these texts will not be presented in the result section or discussion, but solely form an introduction to the subject. Tables and figures will be presented to increase replicability of the literature review (Friberg, 2017).

3.2.1 Searches in databases
Following 10 searches displayed in Table 1 was used in the review;
<table>
<thead>
<tr>
<th>Database</th>
<th>Key words and strings of the search</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LibSearch</td>
<td>Children of alcoholics AND Sweden</td>
<td>53</td>
</tr>
<tr>
<td>ProQuest</td>
<td>Juvenile delinquency AND Parent alcoholism AND Sweden</td>
<td>124</td>
</tr>
<tr>
<td>ProQuest</td>
<td>Parent alcoholism AND Juvenile delinquency AND Sweden</td>
<td>124</td>
</tr>
<tr>
<td>ProQuest</td>
<td>Delinquent children of alcoholic parents AND Sweden</td>
<td>99</td>
</tr>
<tr>
<td>ProQuest</td>
<td>Delinquent juveniles AND Alcoholic parents AND Sweden</td>
<td>56</td>
</tr>
<tr>
<td>Eric via Ebsco</td>
<td>Juvenile Delinquency AND parents AND Sweden</td>
<td>28</td>
</tr>
<tr>
<td>Eric via Ebsco</td>
<td>Youth crime AND Parents AND Sweden</td>
<td>27</td>
</tr>
<tr>
<td>Eric via Ebsco</td>
<td>Juvenile delinquency AND Parent alcohol AND Sweden</td>
<td>7</td>
</tr>
<tr>
<td>Eric via Ebsco</td>
<td>Youth crime AND Parent alcohol AND Sweden</td>
<td>4</td>
</tr>
<tr>
<td>SweSub</td>
<td>Föräldrar missbruk (Parent abuse)</td>
<td>3</td>
</tr>
</tbody>
</table>

When Libsearch was used, the geographical area of Sweden was applied because majority of hits otherwise were irrelevant to Swedish research even though ‘Sweden’ was one of the terms used in the search. In all searches the results were restricted to peer reviewed texts and the time span was set on January 1, 1998 to December 31, 2018. These limits might have excluded some relevant texts, but to ensure high quality and a scientific ground plus avoiding too many hits, this was necessary (Östlundh, 2017). As part of the systematic literature review, backward and forward searches was also conducted. By doing backward searches you identify your relevant literature and look closely at the bibliographies. In this way additional relevant studies published back in time can be identified. When conducting a forward search, it is literature published later than the original article that is of interest. If using the title of a publication in a new search it is possible to find later publications which cite the original article. These later publications might be of interest for the literature review. (Rossow, 2016).

### 3.2.2 Selection criteria’s

Identifying clear selection criterions generates higher trust and better validity of the study (Pati & Lorusso, 2018) but also helps keep track of what publications were
excluded and specifically why. Therefore, following criterions were identified for this literature review; targeted group aged 13-25, Sweden as geographical area, discussion about parental drinking and juvenile conduct problems or delinquency. The texts were also to be peer reviewed and written in English or Swedish and published between 1998-2018. If an article or study discussed alcohol problems in general but lacked focus on children of alcoholics, it was excluded. If an article had Swedish authors but a focus on alcohol problems in another country it was also excluded.

4 ETHICAL CONSIDERATIONS

In all academic papers a discussion about ethical considerations is necessary to respect an individual’s integrity. Ethical presence is essential to all research. For this study no ethical review was handed in before start as this is a literature review which does not handle any personal information, confidential or classified documents. Hence, no written consent has been necessary.

Fifteen out of 17 publications included in this review have an ethical approval from an ethics committee. Two publications have not discussed ethical considerations (Byqvist & Olsson, 1998; Jablomska & Lindberg, 2007). Since this current paper does not risk any individual’s integrity or discriminate, and only uses statistics and already published findings, no specific ethical focus will be further discussed. It is though important to mention that a common sense must be present when conducting research to make sure any ethical boundaries are not crossed. It is also important to be careful and ensure that information is correctly analysed in line with chosen method (The Research Ethics Guidebook, 2019).

5 RESULTS

In this section the main results are presented, these are also summed up in Appendix I. Selection of studies, focus of studies and main themes will also be discussed. The review results will be presented divided into two segments based on the research questions.

5.1 Study selection
A total of 530 hits were screened and publications with headlines irrelevant to the aim were excluded. Remaining 106 abstracts were read through to clarify they fulfilled the inclusion criteria of the study. Fifteen publications were picked out based on selection criterions from the database searches. Another 5 relevant publications were found through backward and forward searches in Google scholar. A total of 17 texts were eligible for inclusion according to the selection criteria and they were read outright, and main findings were noted. The search results are shown in a flow diagram below (Fig. 1).
The most important findings from the 17 included publications are presented in summary in Appendix 1. The publications consist of 16 original publications and one commentary. Sample size in these texts vary a lot, from 15 to 1,007,333 individuals since some studies use interviews and others examines whole cohorts or individuals born between specific years. The time span of publication of the included articles is somewhat scattered, there was for example no publication eligible for inclusion publications between 1998 and 2007. The year with most publication used in this review is from 2016.

5.2 Themes of focus
As presented in Figure 2 below the focus of the 17 included publications are diverse, and so is their choice of method. Interviews was used in four studies, self-reports and intake assessment files were used in two studies, questionnaires were used in four studies, national registers and official records were used in nine studies, which of two publications were cohort studies.

Three of the studies had its focus on criminality (Kenneth et al., 2016; Tidefors et al., 2011; Tidefors, et al., 2018), another two focused on criminality and substance abuse (Byqvist & Olsson, 1998; Scheffel et al., 2004). Seven publications had its
focus on different parental variables such as SUD, anti-social behaviours and violence and the offspring impact (Jablonska & Lindberg, 2007; Alexanderson & Näsman, 2017; Af Klinteberg et al., 2011; Berg et al., 2016; Kaner & McGovern, 2016; Hodgins et al., 2013 & Vinnerljung & Sällnäs, 2007). The five remaining publications focuses on risk factors and early predictors for criminal behaviours and SUD (Wallinius et al., 2016; Kendler et al., 2014; Kendler et al., 2016 & Näsman & Alexanderson, 2017). Although all publications do not focus solely on CoAs they all include some discussion about parental alcoholism and youth externalizing behaviours as criminality.

5.3 Literature review

Below the results will be presented for each research question separately.

5.3.1 Can youth criminality be explained by parental alcoholism?

Several studies found significant correlations between having alcoholic parents and youth criminality (Af Klinteberg et al., 2011; Kaner & McGovern, 2016; Kenneth et al., 2016 & Wallinius et al., 2016). Kenneth et al., (2016) identified 3085 half-sibling sets in their sample whom all had at least one high risk biological parent, where at least one sibling was home-reared and one adopted-away. They found that the adopted half-sibling was 40% less likely to become criminal. They could also see that that having high risk parents (with criminal convictions and/or SUDs) increased the overall likelihood of criminal behaviour in offspring (Kenneth et al., 2016).

According to Vinnerljung & Sällnäs (2007) having a history of childhood maltreatment – history of parental abuse, alcoholism and neglect – had an independent impact on criminality in young adulthood. In this study, 59% of the sample (n=718) had experienced maltreatment during childhood. The sample consisted 70% of all juveniles aged 13-16, placed in out-of-home care in 1991. Of the sample, 42% were placed in out-of-home care due to behavioural problems (31% girls / 54% boys). Having a childhood imprinted by maltreatment increased the odds for being sentenced to prison or probation (OR=2.0) and being hospitalized due to mental health problems (OR=1.5), (Vinnerljung & Sällnäs, 2007). Their data also indicated that 20% of girls placed in out-of-home care had been seriously involved in crimes whereof 21% had been sentenced to probation or prison. Among the boys placed in out-of-home care for behavioural problems
and 5.6% had died before turning 25. Roughly 53% had been in prison, compared to the rest of the population where 2.9% had been in prison. The larger amount of these boys had indicated serious involvement in crime before age 25 whereof 58% had been sentenced to prison. About 30% of these boys had been hospitalized due to mental health problems around the age 20-24, compared to 1.2% in the rest of the population (Vinnerljung & Sällnäs, 2007).

Some further gender differences were found in relation to youth criminality, for example that parental AUD influence the development of CB in daughters (OR\textsuperscript{5} = 2.32) and sons (OR = 2.71) slightly differently (Long et al., 2018). However, they saw that the risk for AUD, DUD and CB in offspring were increased in both sons and daughters who had parents with AUD (Long et al., 2018). Further did Kendler et al., (2016) verify that father alcohol consumption had substantial direct paths to offspring adult alcoholism and that the genetic risk factors AUD is related to offspring externalizing disorders and traits. Berg et al., (2016) saw in their study of 740 000 15-16 years old’s that parental alcoholism were associated with lower school performances in offspring, and most of this low school performance was associated with psychosocial adversity. They could also see some indications that daughters of alcoholic parents are at greater risk for developing adult psychopathology (Berg et al., 2016). In the study of Af Kliteberg et al., (2011) they also saw that males with a criminal father was twice as common to be convicted for a crime (OR=2.19) and among the males with an alcoholic father it was three times as common to subsequently be convicted. These males were also three times more at risk (OR=3.0) to die between the ages of 28 and 56, compared to males without an alcoholic father (Af Kliteberg et al., 2011).

Some detailed information was found on specific offender groups. Byqvist & Olsson (1998) saw that in the group of low-crime addicts who had a criminal debut at 14-15 years of age (where 45 percent of first offences were property crimes), 36% had parents with an alcohol abuse, whereof 31% where fathers and 5% mothers. Wallinius et al., (2016) found that 35% of violent offenders in emerging adulthood were CoAs. In this study it was also found that the offenders scored about 25% higher on the Life History of Aggression scale (LHA Total score). Tidefors et al., (2011) found that 29% of their sample (n=45) of youth sexual offenders had parents with AUD or DUD. Tidefors et al., (2018) found similar numbers as 26% of their sample (n=45) of adolescent sexual offenders had parents with AUD and/or DUD. In one of the studies (Scheffel Birath et al., 2014), abused mothers with alcohol use problems where to estimate problems in their offspring. The 72 alcoholic mothers together had 110 children. Eleven mothers estimated having children with problems in several variables (10%, n=12). According to the mothers estimates 7 children had problems with substance abuse and CB, another 7 had problems with substance abuse and psychic problems and 2 children had problems with substance abuse, psychic problems and CB (Scheffel Birath et al., 2014).

5.3.2 Does parental drinking cause emotional and behavioural problems in Swedish juveniles?
In the study conducted by Long et al., (2018) it was found that CoAs had higher prevalence of externalizing psychopathology compared to children without

\textsuperscript{5}“An odds ratio (OR) is a statistic that quantifies the strength of the association between two events, A and B. The odds ratio is defined as the ratio of the odds of A in the presence of B and the odds of A in the absence of B”
alcoholic parents. It was also found by Kendler et al., (2014) & Kendler et al., (2016) that AUD is a genetic risk factor significant for offspring externalizing disorders and traits. CoAs are also at higher risk for specifically problem behaviours marked by aggression and impulsivity (Kendler et al., 2014). Childhood adverse experiences as parental substance or alcohol abuse were identified as a predictor of higher levels of aggressive antisocial behaviours also in the study of Af Klinteberg et al., (2011). Hodgins et al., (2013) presented in their results that parents with SUD and/or ASB often has children with similar issues. They also reveal that it is very common that CoAs are treated for panic attacks, depression and post-traumatic stress (Näsmann & Alexanderson, 2017). Some of the CoAs in the study of Näsmann & Alexanderson (2017) were treated for panic attacks, depression, post-traumatic stress and psychiatric problems were often present. Children exposed to alcohol and/or substance abuse during childhood scored 16% higher on psychosocial scales compared to children without abusing parents (Wallinius et al., 2016).

Jablomska & Lindberg (2007) found in their study that it is a protective factor living with both parents and not only with for example a single mother since that has proven poorer psychological and social adjustment. It was as well found in the study of Long et al., (2018) that the effects of parental AUD are stronger when both parents have alcohol problems, which causes the risk for AUD, DUD and CB in offspring to increase. Vinnerljung & Sällnäs (2007) found that children who had been maltreated during childhood (history of abuse, neglect, substance abusing or mentally unstable parents or being thrown out of the birth home) are at higher risk for future antisocial behaviours. Alexanderson & Näsmann (2017) found in their study that these children (CoAs) had emotional and psychological problems and for many years. Paternal SUD had direct paths to adult alcoholism in offspring when Kendler et al., (2016) studied risk factors for AUD in Swedish boys and men.

6 DISCUSSION

The aim designed for this paper was to investigate the correlation between parental alcoholism and youth criminality. Below, the results from the conducted literature review will be discussed and following a method discussion will take place to evaluate used procedures.

6.1 Results discussion

The results, with respect to research question 1, show that parental alcoholism is associated with increased risk for AUD, DUD and CB in offspring, low school performances and adult alcoholism. CoAs represent roughly 25-35% in the mentioned offending groups.

The percentiles and numbers found in these studies are to some degree comparable. Unfortunately, Tidefors et al., (2011) and Tidefors et al., (2018) does not separate AUD and DUD as measurements in their studies, which makes it hard to compare their findings with other studies. Also, of importance is the study of Vinnerljung & Sällnäs (2007), who examined juveniles placed in out-of-home care. This makes it difficult to compare with other studies in this review, since the
children in the study of Vinnerljung & Sällnäs were not influenced by their biological parents as they were placed in another home. Still, it is visible that the percentiles of CoAs in the offender groups presented are fairly alike, 26-36%. This does not mean that the percentiles of CoAs will be the same in other offender groups, but it is still quite fascinating that the studies included in this literature review spread between 1998 to 2018 has rather similar numbers of CoAs in their samples. This also proves the importance of further attention to youth criminality and the effects problematic family situations can have. Even though this literature review specifically did not aim at looking for specific crimes committed by CoAs, some interesting information has been attained in the review.

In relation to what previous research has presented it seem like having one non-alcoholic parent in the household gives a protection against risk factors that comes with having an alcoholic parent (Foxcroft & Lowe, 1991; Long, Lönn, Sundquist, Sunquist & Kendler, 2018). It could also give some protection being adopted from alcoholic parents as we could see in the study of Jablomska & Lindberg (2007). With the notion that maternal alcoholism and paternal alcoholism has some varying influence on offspring it becomes thought-provoking when it is declared that the risk for AUD, DUD and CB in CoAs increases when both parents have alcohol problems (Long et al., 2018). As the knowledge on this subject increase it would be beneficial conducting some type of study which looks at how offspring are affected by living alone with a mother/father and how their alcoholic patterns impact criminal behaviour and well-being in offspring. So, a study looking at an additional factor compared to this review, parental drinking problems, family conditions and youth criminality. With the fact that children of single mothers/fathers also are at higher risk for behaviour problems compared to children in two parent families it can be concluded that further research needs to be conducted on gender differences within youth crimes and parental factors to sort out some of these question marks.

Overall it can be concluded that; yes, there is a correlation between having alcoholic parents and youth criminality, a negative effect on youth criminality. Having high risk parents overall increase the probability of criminal behaviour in offspring (Kenneth et al., 2016; Wallinius et al., 2016; Af Klinteberg et al., 2011 & Kaner & McGovern 2016).

The answer to research question 2 could be sum up as; Parental alcoholism has proven to be a genetic risk factor significant for offspring externalizing disorders and traits. CoAs are also at higher risk for specifically problem behaviours marked by aggression and impulsivity. Adult psychopathology and psychosocial adversity have also been revealed in CoAs.

As the focus of this literature review did not lie in studying prevention measures it was not searched for in included publications per se, even if so, the absence of discussion about preventive measures was apparent. It was as well obvious when reading previous research and included publications in the review that there are no recognized benefits of having parents with alcohol problems. Which makes me wonder; what can we do to decrease the likelihood of problem behaviours in CoAs? As the results indicate a strong correlation between parental alcoholism and externalizing disorder and traits in offspring a larger emphasis must be put in finding these youths and helping them. As prior research has presented, problem behaviours in juveniles is often explained by the fact that these individuals are
teenagers and in puberty (Skoog, 2008), as it would be an explanation or acceptance for bad behaviours and youth criminality.

While conducting this systematic literature review, it has become visible that far more gender differences are evident in youth crimes than anticipated, almost all included publications have some results on gender differences. Although this paper did not intend to specify on gender differences, some findings had to be mentioned due to its significance. To display a complete gender perspective from an academic point of view, more time and another focus is required. Most research conducted during the last decades on juvenile delinquency are focused on males, since it traditionally has been more boys that display behavioural problems at this stage in life (El-Khoury, Sundell & Strandberg, 2005; Farrington, 1996). Therefore there is somewhat of a lack of comparable research applicable to female offending. Of the included publications three solely focus on men/boys (Wallinius et al., 2016; Kendler et al., 2016; Tidefors et al., 2018) and the rest focused on both genders. The results are however in line with what prior research have documented on gender differences so far. As could be seen in the study of Long et al., (2018) sons are more influenced by parental alcoholism than daughters. However, it was found that daughters are specifically influenced by maternal alcoholism and are at great risk for psychopathology (Berg et al., 2016). So maybe are sons not affected more than daughters but are affected negatively in another way compared to daughters. It could be that negative effects in sons are more visible in their criminal behaviour, but it is more visible in daughters psychological and mental well-being. Or maybe it depends on which parent that has abuse problems, what affects that appear in sons and daughters?

So, the findings from this systematic literature review are consistent with what a substantial amount of previous research from international sources has presented, namely that CoAs are at greater risk for externalizing disorders and criminality compared to children without alcoholic parents (McAdams et al., 2014; Nordlöf, 2012). The liability of previous research presented could hence be considered improved with findings from this Swedish literature review. Important to note is though that these results are not generalizable since they only focus on Sweden. What I also have come to realize is that there is wider and more substantial proof of CoAs developing behavioural problems than becoming criminal. It seems like many studies are careful to some extent to confirm the correlation between parental alcoholism and youth criminality before having had an extended discussion on various behavioural problems that might appear in CoAs or children overall. As in this literature review it has been clearly stated that CoAs are not only at high risk for criminality and externalizing behaviours but also psychological issues and later negative adult effects as alcohol problems (Kendler et al., 2016; Nässman & Alexanderson, 2017; Vinnerljung & Sällnäs, 2007). CoAs often also adopt SUD and ASB when this is present in parents (Hodgins et al., 2013).

6.2 Method discussion
This paper is based on a systematic literature review, a method which has shown to be very efficient when studying a specific field of research and in this case specifically in Sweden. By using PRISMA, structured modus operandi has been utilized, which has helped keeping track of procedures and steps taken during the process. By applying clear inclusion and exclusion criteria’s, irrelevant publications could easily be sorted out. The replicability of the study also became
better with the review’s systematic approach. A comprehension of a minimum amount of publications that should be included in a literature review does not exist per se, however, one should strive after including all publications which are relevant for the study (Forsberg & Wengström, 2008). In this literature review a total of 17 publications were included for investigation but there is probably many more relevant for the subject, but it would require more testing of other key words in searches and possible inclusion of other databases. It has been difficult at some points in the literature review to find relevant studies eligible for inclusion since it has shown not to exists so many studies with the chosen focus on children of alcoholics and youth criminality. This has further indicated the fact that it is a narrow research field in Sweden.

6.2.1 Risk of bias
As for risk of biased results, there is for systematic review three types of bias which are important to have in mind; selection bias, information bias, and confounding bias (Borges de Almeida & Garcia de Goulart, 2017). In a literature review with many published reviews to go through, as in this case 530, several eligible studies may be missed resulting in selection bias. confounding bias can be avoided by selecting publications with recognized methods and required information to ensure inclusion. Publication bias could be explained as what could happen when researches chose not to publish some results, often negative results. However, in the publications used in this review, negative correlations between parental alcoholism and youth criminality has been frequently mentioned. The downside with being only one author when conducting a literature review is that it becomes somewhat harder to strengthen the inclusion criteria’s in each specific case, and hence the risk for biased results is possible. There is a test which can be carried out to ensure that bias results are reduced. The test is a review constituted by Cochrane, which unfortunately a time-consuming process and is therefore not applicable on this master paper.

7 LIMITATIONS

Unfortunately, there are few studies conducted in Sweden on the relationship between children developing behavioural problems and having abusing parents (Larm, 2017). A clear limitation is that many studies do not separate risk factors. Peer pressure is for instance a frequently discussed risk factor and AUD and DUD are rarely separated and instead discussed in general as SUD, which makes it difficult to establish a strong significance between parental alcoholism and juvenile delinquency. Some literature also discusses alcoholism in more detail, looking at diagnoses and health care measurements. Unfortunately, these discussion does not fit in this paper. It is important to mention at this point that there has been some additional difficulties in this systematic review to compare and value some research since it not always stated if authors refers to parents with alcohol use problems or in fact measured alcoholism diagnoses which one has been treated for in health institutions. Another limitation has been the fact that used publications for the review use varying age groups, and boys are more often research than girls. Due to this, this literature review’s findings should be interpreted with caution.
It is important to indication that the numbers and percentiles used in this systematic review are some from studies where the authors have used self-reported information which could imply some under-reporting. Hence it is important to keep in mind that these numbers probably are greater than written, since there always are some hidden numbers since there are some problematic individuals who does not encounter judicial or health institutions and parents whose problems are hidden.

7.1 Implications for the future
In future studies on juvenile delinquency it would be interesting to see research on specific types of crimes committed by youngsters and if the level of these crimes is affected by family factors such as parental alcoholism. Also, maternal respective paternal alcohol problems and its effects on sons and daughters are of interest. The question is; is it possible that gender could be taken into consideration as a risk factor when it comes to youth criminality? Another implication for the future is to conduct interviews with CoAs and look at § 31-investigations and police reports where underage persons has committed crimes to get another point of view of the problem of parental alcoholism and youth criminality.

Overall it is important that more studies are conducted on this field of research. Looking at later adult effects would also be beneficial to study as the research field today is quite narrow. The problems identified in this paper calls for a further discussion about alcoholism prevention as parental drinking is proved to be a risk factors for juvenile delinquency. We need to work on suggestions on how we can prevent more costs for the society, lower the levels of youth crimes and psychological problems in youth and later adult delinquency and behavioural problems.

8 CONCLUSION
The research field in Sweden on parental alcoholism and negative effects in offspring is limited but in line with international research. The results show that CoAs are at higher risk for externalizing behaviours as criminality and conduct disorders, but also at greater risk for depression and anxiety compared to children with non-alcoholic parents.

Parental alcoholism can therefore be an explanation behind some youth criminality, and parental drinking often causes not one but many types of emotional and behavioural problems in Swedish juveniles. Presented findings on the problematic wellbeing of these children’s calls for a more direct focus on negative effects of parental alcoholism and how to prevent these. The findings are important for the development of crime prevention work in Sweden and the general understanding of family risk factors on youth criminality.
9 REFERENCES


Järkestig Berggren, Ulrika & Hanson, Elizabeth – *Stödprogram riktade till barn och/eller föräldrar när en förälder missbrukar alkohol eller andra droger: en


## APPENDIX I

<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s), type of study</th>
<th>Age group</th>
<th>Sample Size</th>
<th>Method</th>
<th>Focus</th>
<th>Main Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Long et al.,  (2018)</td>
<td>15-25</td>
<td>1,007,333</td>
<td>National registers + Logistic regressions</td>
<td>Externalizing disorders in Alcoholics offspring</td>
<td>CoAs had higher prevalence of externalizing psychopathology than children without alcoholic parents. CB was significantly increased for CoAs. Maternal AUD had stronger impact than paternal AUD on CB. Paternal AUD influenced CB in sons more than CB in daughters.</td>
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<tr>
<td></td>
<td>Tidefors et al., (2018)</td>
<td>13-22</td>
<td>45 men</td>
<td>Intake assessment files and questionnaires</td>
<td>Recidivism rate in men who committed first sexual offence as adolescent</td>
<td>26% (12 n) adolescents sex offenders had alcohol and/or drug abusing parents.</td>
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<tr>
<td></td>
<td>Alexanderson &amp; Näsman (2017)</td>
<td>6-19</td>
<td>15</td>
<td>Interviews</td>
<td>Children living with abusing parents</td>
<td>Children of alcoholics in the study got emotional and psychological problems for many years.</td>
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<td></td>
<td>Näsman &amp; Alexanderson (2017)</td>
<td>(6-12) &amp; 13-19</td>
<td>30</td>
<td>Interviews</td>
<td>Children's perspective on misusing parents</td>
<td>Parental drinking led to absence from school and lot of fights in school. Children of alcoholics had issues trusting others and preferred distance to others. Some of the juveniles with alcoholic parents had been treated for panic attacks, depression, post-traumatic stress. Psychical problems were often occurring in the children of alcoholics.</td>
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<tr>
<td>Study</td>
<td>Type</td>
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<td>Start-End</td>
<td>Sample</td>
<td>Data Source</td>
<td>Findings</td>
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<tr>
<td>Berg et al., (2016)</td>
<td>Original article</td>
<td>Register study in a national cohort</td>
<td>15-16</td>
<td>740 618</td>
<td>Alcohol-related disorders and offspring school performance</td>
<td>There is a greater risk for adult psychopathology in daughters of alcoholic mothers. Conduct disorders are more often found in CoAs compared to children without alcoholic parents. Psychosocial adversity in children is related to parental drinking.</td>
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<tr>
<td>Kendler et al., (2016)</td>
<td>Original article</td>
<td>Conscrip register, national birth cohort, questionnaires</td>
<td>25</td>
<td>47 414 men</td>
<td>Risk factors for AUD</td>
<td>Father alcohol consumption had substantial direct paths to offspring adult alcoholism. The genetic risk factors AUD is related to offspring externalizing disorders and traits.</td>
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<td>Kenneth et al., (2016)</td>
<td>Original article</td>
<td>Swedish national registers</td>
<td>Born 1955-1990</td>
<td>4261 sibling sets</td>
<td>General transmission of crime</td>
<td>Having high risk parents increase the risk for criminal offending in offspring. If having high-risk parents, being adopted decreases the likelihood of childhood conviction with 40%. High risk parents mean high risk offspring.</td>
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<td>Wallinius et al., (2016)</td>
<td>Original article</td>
<td>Questionnaires to inmates</td>
<td>18-25</td>
<td>270 males</td>
<td>Early predictors of aggressive antisocial behaviours</td>
<td>35% of violent offenders in emerging adulthood had grown up with childhood adverse experience as parental alcohol abuse. Children exposed to alcohol and/or substance abuse during childhood scored 16% higher on psychosocial scales compared to children without abusing parents. Childhood adverse experiences as parental substance or alcohol</td>
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<td>Source</td>
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<td>Sample Size</td>
<td>Data Collection</td>
<td>Key Findings</td>
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<td>Kendler et al., (2014)</td>
<td>Original article</td>
<td>1-20</td>
<td>Swedish Crime Register</td>
<td>Genetic and environmental factors in criminal behaviour. Parental alcohol abuse and criminality strongly predicted probability of criminal behaviour. Children of alcoholic parents are at higher risk for experiencing externalizing behaviours and problem behaviours marked by aggression and impulsivity.</td>
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<td>Scheffel Birath et al., (2014)</td>
<td>Original article</td>
<td>Alcoholic mothers 72</td>
<td>Interviews and questionnaires</td>
<td>11 alcoholic mothers estimated having together 12 (10% of sample) children with definite problems with several variables, psychic problems, criminal behaviours and substance use problems.</td>
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<td>Hodgins et al., (2013)</td>
<td>Original article</td>
<td>Average 16,7</td>
<td>Official Criminal Files</td>
<td>Parental SUD and offspring SUD</td>
<td>Parents with high levels of AUD and ASB often has offspring with same problems.</td>
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<tr>
<td>Af Klintenberg et al., (2011)</td>
<td>Original article</td>
<td>13-27</td>
<td>Birth Cohort Study + Register data Sources</td>
<td>Family psychosocial characteristics in childhood</td>
<td>Family psychosocial characteristics as alcohol abuse remain significantly associated with the individual’s subsequent criminality. Early-onset alcohol problems were closely connected to criminal behaviour and a family history of alcohol abuse.</td>
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<td>Tidefors et al., (2011)</td>
<td>Original article</td>
<td>13-22</td>
<td>Intake assessment files and self-report questionnaire</td>
<td>Sexual offending boys</td>
<td>29% of the sample (Youth sexual offenders) had parents with alcohol or drug problems.</td>
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<tr>
<td>Jablomska &amp; Lindberg (2007)</td>
<td>Original article</td>
<td>14-15</td>
<td>Youth self-reports + Family structure and juvenile</td>
<td>Children of single mothers/fathers were at higher risk of various</td>
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Bivariate and multivariate logistic regression analyses

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Study Design</th>
<th>Sample Size</th>
<th>Data Source</th>
<th>Outcomes</th>
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<td>National register data</td>
<td>Delinquency, behavioural problems in youth</td>
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<td>Byqvist &amp; Olsson</td>
<td>1998</td>
<td>Interview and official records</td>
<td>1268</td>
<td>Swedish Police Register(s)</td>
<td>Drug abuse and criminality</td>
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**ASB** = Anti-Social Behaviour  
**AUD** = Alcohol Use Disorder  
**CB** = Criminal Behaviour  
**CoAs** = Children of Alcoholics  
**DUD** = Drug Use Disorder  
**SUD** = Substance Use Disorder
# PRISMA 2009 Checklist

<table>
<thead>
<tr>
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<th>#</th>
<th>Checklist Item</th>
<th>Reported on page</th>
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<tbody>
<tr>
<td><strong>ABSTRACT</strong></td>
<td>1</td>
<td>Identify the report as a systematic review, meta-analysis, or both</td>
<td>1**</td>
</tr>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
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</tr>
<tr>
<td>Rationale</td>
<td>3</td>
<td>Describe the rationale for the review in the context of what is already known</td>
<td>2</td>
</tr>
<tr>
<td>Objectives</td>
<td>4</td>
<td>Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS)</td>
<td>3</td>
</tr>
<tr>
<td><strong>METHODS</strong></td>
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<tr>
<td>Protocol and registration</td>
<td>5</td>
<td>Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number</td>
<td>-</td>
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<tr>
<td>Eligibility criteria</td>
<td>6</td>
<td>Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale</td>
<td>-</td>
</tr>
<tr>
<td>Information sources</td>
<td>7</td>
<td>Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched</td>
<td>8-9</td>
</tr>
<tr>
<td>Search</td>
<td>8</td>
<td>Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated</td>
<td>9</td>
</tr>
<tr>
<td>Study selection</td>
<td>9</td>
<td>State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis)</td>
<td>10</td>
</tr>
<tr>
<td>Data collection process</td>
<td>10</td>
<td>Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators</td>
<td>10-11</td>
</tr>
<tr>
<td>Data items</td>
<td>11</td>
<td>List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made</td>
<td>-</td>
</tr>
<tr>
<td>Risk of bias in individual studies</td>
<td>12</td>
<td>Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis</td>
<td>-</td>
</tr>
<tr>
<td>Summary measures</td>
<td>13</td>
<td>State the principal summary measures (e.g., risk ratio, difference in means)</td>
<td>-</td>
</tr>
<tr>
<td>Synthesis of results</td>
<td>14</td>
<td>Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., P for each meta-analysis)</td>
<td>-</td>
</tr>
<tr>
<td><strong>RESULTS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk of bias across studies</td>
<td>15</td>
<td>Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies)</td>
<td>8, 16</td>
</tr>
<tr>
<td>Additional analyses</td>
<td>16</td>
<td>Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified</td>
<td>-</td>
</tr>
<tr>
<td><strong>DISCUSSION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summary of evidence</td>
<td>24</td>
<td>Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers)</td>
<td>14</td>
</tr>
<tr>
<td>Limitations</td>
<td>25</td>
<td>Discuss limitations at study and outcome level (e.g., risk of bias), and at review level (e.g., incomplete retrieval of identified research, reporting bias)</td>
<td>16-17</td>
</tr>
<tr>
<td>Conclusions</td>
<td>26</td>
<td>Provide a general interpretation of the results in the context of other evidence, and implications for future research</td>
<td>17-18</td>
</tr>
<tr>
<td><strong>FUNDING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding</td>
<td>27</td>
<td>Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review</td>
<td>-</td>
</tr>
</tbody>
</table>

*First and second page, non-numbered.*