Beyond detention: The effectiveness of aftercare for juvenile and young adult offenders

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Chapter 2.

Aftercare programs for reducing recidivism among juvenile and young adult offenders: A Meta-Analytic Review

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Abstract

The aim of this meta-analytic study, including 22 studies and 5,764 participants, was to examine the effects of aftercare programs on recidivism in juvenile and young adult offenders released from correctional institutions. The studies had to be (quasi-) experimental, with the control group receiving 'care as usual' or no treatment. Recidivism was measured by re-arrests and/or re-convictions and was based on official reports. Although the overall effect size for aftercare programs was generally small (d = .12), moderator analyses indicated more substantial effects and showed that aftercare is most effective if it is well-implemented and consists of individual instead of group treatment, and if it is aimed at older and high-risk youth. Whereas the treatment duration and moment of starting the aftercare program were not related to the program's effectiveness, more intensive aftercare programs were associated with lower recidivism rates.

Recidivism among juveniles and young adults who are released from a correctional facility and re-enter society is high. In the United States, for example, there is a recidivism rate of approximately 55 percent after a 12-month follow-up period (Snyder & Sickmund, 2006), with similar percentages in some other countries (Wartna et al., 2010). There are several explanations for why the transition from correctional facilities to society is problematic, especially for juveniles and young adults. First, it is difficult for most people to change their lives of crime and become productive citizens (Travis, Solomon, & Waul, 2001). Detention and incarceration disrupts the life of those involved, because they are physically removed from their families, schools and communities. The service and support that family, friends and other important persons provide often come to a halt during detention, which makes successful rehabilitation difficult (Mears & Travis, 2004). Second, the challenge of changing life is even greater for juveniles and young adults, as they are facing both the transition from their detention facility to the broader community and, simultaneously, the transition from adolescence to adulthood, which has its own specific challenges. The cognitive capacity and life skills of adolescents and young adults differ from those of adults, and they are still going through the developmental stages of identity, moral and social development until approximately the age of 25 (Arnett, 2000; Grisso & Schwartz, 2000; Zimmerman, 2005).

Although interventions and rehabilitation programs during incarceration sort positive effects (Lipsey & Cullen, 2007), it appears that they are not successful enough to prevent the majority of the juveniles and young adults from re-offending (Altschuler, Armstrong, & MacKenzie, 1999), given the high recidivism rates of juveniles and young adults who participated in these programs. Altschuler and Armstrong (1998) carried out longitudinal research on juvenile offenders and found that gains in prosocial behavior and academic involvement rapidly faded after discharge. The juvenile offenders return to the environment in which their delinquent behavior developed and where factors contributing to their delinquent behavior are still present. The transition from a "closely monitored and highly regimented life in a secure institutional environment to unstructured and often confusing life in community" (Altschuler & Armstrong, 1994, p.7) can make juveniles and young adults relapse into crime (Greenwood & Zimring, 1985).

Since public safety is threatened by high recidivism rates, how juveniles and young adults fare post-release has become a critical criminal justice policy issue. Consequently, interest in aftercare for juvenile and young adult offenders has grown remarkably over the past two decades and more re-entry and aftercare programs have been developed and provided for offenders released from detention to improve chances of successful reintegration (Altschuler & Armstrong,

2002; Mears & Travis, 2004). Research has shown that lower recidivism rates and positive adjustment to the community are achieved when the transition from correctional facilities to the community is directed and supervised (Fagan, 1990; Goodstein & Sontheimer, 1997). Jarjoura (2000) argues that if youths stay out of trouble in the first few months after release, their chances of maintaining work, reaching their academic goals, and develop independent lifestyles increase. A re-entry intervention that starts when youths are incarcerated could therefore promote successful community reintegration and reduce repeated offending by youths released from juvenile correctional facilities, according to Altschuler and Armstrong (1994).

In recent years, it has become widely acknowledged that interventions aimed at reducing recidivism can be effective if they meet the *What Works* principles of effective judicial intervention derived from the Risk-Need-Responsivity (RNR) model and two additional principles pertaining to program integrity and professional discretion (Andrews, Hoge, Bonta, Gendreau, & Cullen, 1990; Andrews & Bonta, 1994; 2010). The RNR model assumes that the intensity of the intervention should be adjusted to the *risk* of reoffending, target the criminogenic *needs* (risk factors that directly influence criminal behavior) and align with *responsivity* of the offenders, hence be suitable and appropriate for the specific group of interest (Andrews et al., 1990; Lipsey, 1992). In order to be effective in reducing recidivism, family treatments have played an important role in aiming to change the risk factors in the home situation in several intervention programs, such as Multisystemic Therapy (Henggeler, Melton and Smith, 1992) and Multidimensional Family Therapy (Liddle, Dakof, Henderson, & Rowe, 2010). These programs aim to address criminogenic needs at different levels of the juvenile's functioning, with a central role for the family system.

A juvenile aftercare or re-entry program should encompass specific program elements and service areas. Altschuler and Armstrong (1994) developed the Intensive Aftercare Program (IAP) model. According to their model, an aftercare program should include offender (risk) assessment and classification, coordinated case management combined with treatment and matching surveillance services (Altschuler et al., 1999). Other models with similar program elements and service areas have been developed and implemented since (Winterfield & Brumbaugh, 2005).

A substantial number of studies on the effectiveness of aftercare and re-entry programs for juvenile and young adult offenders have been carried out. To improve the successful transition to society and reduce future problematic and delinquent behavior that puts society at risk, it is important to gain more insight into whether aftercare is effective for specific groups of juvenile and young adult offenders, and what specific aspects of aftercare programs moderate their effec-

tiveness. Re-entering youths are, presumably, a heterogeneous group with, consequently, diverse needs for successful reintegration (Sullivan, 2004). Risk factors connected to client characteristics contributing to juvenile recidivism that might influence the effectiveness of re-entry or aftercare programs include age, number of prior offenses, psychopathology, substance abuse and peer delinquency (Loeber & Farrington, 1998; Loeber, Farrington, Stouthamer-Loeber & White, 2008). Other possible moderators related to intervention characteristics are the type, intensity, duration and start of the intervention (Andrews et al., 1990). The impact of all these moderators on the effectiveness of aftercare programs can be examined in the most robust manner by means of a meta-analysis.

The present study

The purpose of the present study was to gain insight into the effectiveness of re-entry and aftercare programs and interventions aiming to reduce recidivism amongst juvenile and young adult offenders. In order to establish the overall effectiveness of the programs and to examine which factors moderate the reduction of recidivism that these programs aim to accomplish, a meta-analysis was carried out. The meta-analysis aimed to determine which components of the aftercare programs and client characteristics are related to a positive program outcome. The outcome of interest was recidivism of juvenile and young adult offenders, assessed by means of re-arrests or reconvictions.

Method

Selection of studies

The search method to identify the relevant studies involved the inspection of the computerized databases Academic Search Premier; African Index Medicus; American Society of Criminology (ASC); Campbell Collaborations Social, Psychological, Educational & Criminological Register (C2-SPECTR); Center for Sex Offender Management (USO); Criminal Justice Periodical Index; EBSCOhost Academic Search Premier; Educational Resources Information Centre (ERIC); Informaworld; National Criminal Justice Reference Service (NCJRS); Office of Juvenile Justice and Delinquency Prevention publications (OJJDP); OvidSP; PsycINFO, ProQuest International Trials System; PubMed; SAGE Journals Online; ScienceDirect; Whiley Interscience, and Google Scholar.

In order to minimize potential publication bias, we searched for unpublished studies, 'grey literature', using specialist online search engines, cross-refer-

encing of bibliographies and hand searching 'key journals' and dissertation abstracts. Authors were contacted to identify possible unpublished and missing data on study and sample characteristics and outcomes, which led to the inclusion of one additional study. Searches were conducted and studies were included until and up to May 2012. The following key words were used for our search in varying combinations: juvenile*, offender*, delinquen*, adolescent*, youth*, young adult*, young people*, parole, aftercare, correction*, detention*, institution*, reenter, reentry, rehabilitation, re-integration, transition service*, probation, program*, recidivism, evaluation*, effectiveness, outcome*. Studies were not excluded on the basis of language or geography.

In order to maximize internal validity, only studies using an experimental (RCT) and/or quasi-experimental research design were included, according to Level 3 to 5 of the Scientific Methods Scale (SMS) developed by Sherman and colleagues (1997). Studies were eligible for inclusion if they evaluated re-entry or aftercare interventions aimed at decreasing recidivism for juvenile and/or young adult offenders, regardless of the year of publication. Programs and interventions aimed at reducing recidivism after detention, vary in structure. There is a clear distinction between what Lipsey (2008, p. 128) referred to as "therapeutic program approaches that attempt to engage youth in a supportive, constructive process of change" and "approaches that rely on more external control and coercion (e.g., through discipline or surveillance)." In the current study, only programs and interventions that incorporated a treatment modality, such as skills training, counseling and cognitive behavioral therapy were eligible for inclusion. Studies were excluded if the interventions primarily used external control and coercion. Examples of such studies are various programs carried out by probation officers, such as particular Intensive Supervision Programs (Petersilia & Turner, 1993). All participants had to have spent time in a form of detention when enrolled in the re-entry or aftercare program, being either a correctional or secure care facility for juveniles and/or adults. The re-entry or aftercare interventions aimed at decreasing recidivism programs in juvenile and/or young adult offenders started during or immediately after detention. Treatment group youths had to join an aftercare program either during detention or post-release, while control group youths were assigned to 'care as usual' or no treatment (minimal contact). 'Care as usual' generally encompassed regular (probation) supervision, without therapeutic treatment.

Participants were male and female juvenile and young adult offenders with various ethnic backgrounds. The minimum age of 10 years (when entering the program) was chosen as, taking the age of legal responsibility in most countries into account, it is unlikely to find any aftercare programs for juvenile delinquents younger than age 10. The (mean) age of the participants in the studies was not

limited to 18 years, but young adults (18-25 years) were also included, because we agree with Mears and Travis (2004, p. 5) that "the boundary typically drawn between juvenile and adult justice systems obscures the fact that individuals do not, from a developmental perspective, suddenly become adults simply because they reach a certain age or are processed in the adult criminal justice system". Instead, one should consider the transition from adolescence to adulthood as a process of 'emerging adulthood', with young adults more closely resembling juveniles than adults with respect to their development, risk and needs (Arnett, 2000). Therefore, a maximum mean age of < 25 years was maintained. Studies that did not primarily focus on juveniles, but also on young adults could also be taken into consideration.

The outcomes presented in the studies had to include recidivism rates or at least sufficient information about new offenses, based on official records. Re-arrests and -convictions are the most widely used measures of recidivism, with the advantage that these data are easily accessible and do not require the active cooperation of subjects. Studies were eligible if they included at least one measure of the following concepts of recidivism: 1) any new conviction/adjudication (of any new crime committed after exiting the correctional facility and becoming a study participant. A new crime was defined by any new adjudication, for juveniles, or conviction, for adults) and/or; 2) any new arrest (any new arrest after exiting the correctional facility). Eligible studies included a follow-up time of at least 3 months to measure recidivism.

Coding the studies

Each subcategory of a categorical moderator had to contain a minimum of two studies in order to be included in the analyses. Location of the program was therefore excluded as a moderator, since all studies originated from the USA, except for one, which was conducted in the UK.

In case of heterogeneity of the effect sizes, the following continuous sample characteristics were tested as moderators: mean age, age of first arrest, number of prior offenses, proportion ethnic minority, gang involvement, and drug abuse. Furthermore, treatment duration and treatment intensity (measured by the number of contacts each month) were included as continuous treatment characteristics. Continuous study characteristics were publication year, impact factor of the journal, methodological quality of the study and attrition. The methodological quality of studies was assessed using a quality checklist (Downs & Black, 1998), which measures quality in terms of reporting, external validity, internal validity (bias and confounding) and power, with a maximal quality score of 32. QI scores 20 were considered good; 11 to 20 moderate, and < 11 poor.

The following categorical sample and treatment characteristics were coded: gender (female/mixed/male sample), predominant index offense (violent/non-violent), recidivism risk (low/low-moderate/moderate/moderate-high/high), treatment modality, (individual/systemic (focusing on different systems the individual may function in)/both), treatment approach (individual/group/both), treatment modality by approach interaction, and start of intervention (before/after release). In addition, categorical study characteristics, such as study design (RCT/matched control group/quasi experimental design), publication source (journal articles/dissertations/research reports), implementation of the study (well implemented/some difficulties/many difficulties/does not mention implementation), time until last follow-up measurement (3-6 months/6-12 months/12-18 months/18-24 months), nature of the control group (care as usual/no treatment/unknown) and pre-test differences between the treatment and control group (yes/no) were included as moderators.

For assessing recidivism, we used official reports of delinquency following an index offense. In case both re-arrest and reconviction rates were reported, preference was given to re-convictions, since arrests may wrongly occur or not necessarily lead to adjudication, while reconvictions are a more robust way of establishing whether a person committed a crime. When follow-up outcomes for the same sample at multiple time points were reported, the longest follow-up period was chosen, because a longer follow-up period gives a more meaningful indication of recidivism. Where multiple reports are based on the same dataset or sample, we only included the study once, including the most extensive study and/or with the longest follow-up period. All studies that were possibly eligible for inclusion were reviewed, selected and consecutively double-coded by the first author and one of the co-authors, yielding a Cohen's Kappa greater than .80, which indicates good inter-rater reliability.

Data analysis

The impact of aftercare on recidivism was based on percentage of success (proportion of sample not recidivated), by converting correlations, means and standard deviations, percentages, and *t*-, *F*-, χ^2-, *p*-values or odds ratios into the effect size measure Cohen's *d* (Standardized Mean Difference). The included studies were large enough to warrant the use of Cohen's *d* over Hedges' *g*, which is generally used in the case of smaller sample sizes. Notably, the choice for Hedges' *g* or Cohen's *d* results in only marginal differences, in particular if (1) sample sizes of the primary studies are relatively large and if (2) the combined mean effect size is adjusted for differences in sample size among the primary studies that are included in the meta-analysis (Durlak, 2009). Combined mean effect sizes were

calculated and moderator analyses were conducted with SPSS17 macros from Lipsey and Wilson (2001), with adjustment for differences in sample size among primary studies by weighting the effect sizes by the inverse of the variance (Lipsey and Wilson 2001, p. 110). In interpreting the magnitude of the effect sizes, widely used conventions formulated by Cohen (1988) were applied. Effect sizes of $d \leq .20$ and $d \geq .80$ are respectively considered small and large effects (Lipsey & Wilson, 2001).

Given that the present meta-analysis only included 22 studies (see below), the fixed instead of the random effects model was chosen in order to preserve sufficient statistical power. In the fixed effect model, significance testing is based on the total number of participants, which results in greater statistical power but limited generalizability. Significance testing in random effects models is based on the total number of included studies in the meta-analysis. This results in lower statistical power, but greater generalizability (Rosenthal, 1995). Extreme sample sizes were winsorized to the next highest sample size within the normal range in order to prevent studies with extreme sample sizes from unduly affecting the overall combined effect size.

Homogeneity of the overall mean effect size and combined effect sizes of subsets of studies was tested with the Q_{within} (Q_w) statistic (Hedges & Olkin, 1985), setting $p < .05$, to determine whether the total set of studies was homogeneous, that is, to what extent effect sizes were constant across studies. In case of heterogeneity there are differences among effect sizes that have some source other than subject-level sampling error. These differences may be explained by different study characteristics (Lipsey & Wilson, 2001, pp. 115-119). If the hypothesis of homogeneity was rejected, both categorical and continuous moderator analyses were performed to help explain heterogeneity of the effect sizes.

Publication bias

A common problem in meta-analysis is that unpublished studies often lie unused in file drawers because of non-significant findings, whereas published studies are more likely to have achieved statistical significance (Rosenthal, 1995). To inspect whether such possible publication bias exists, the fail-safe number was calculated (Durlak & Lipsey, 1991). Meta-analytic findings are considered to be robust if the fail-safe number exceeds the critical value obtained with Rosenthal's (1994) formula of $5 * k + 10$: k is the number of studies included in the meta-analysis. An alternative way to find out if the meta-analytic results may be affected by publication bias is to examine a funnel plot of the distribution of effect sizes. Each individual study's effect size is plotted on the horizontal axis against its sample size, standard error or precision (the reciprocal of the standard error) on the

vertical axis. The distribution of effect sizes should be shaped as a funnel if no publication bias is present, since the more numerous studies with small sample sizes are expected to show a larger variation in the magnitude of effect sizes than the less numerous studies with large effect sizes. A violation of funnel plot symmetry reflects publication bias, that is, a selective inclusion of studies showing positive or negative outcomes (Sutton, Duval, Tweedie, Abrams, & Jones, 2000). Funnel plot asymmetry can be tested by regressing the standard normal deviate, defined as the effect size divided by its standard error, against the estimate's precision (the inverse of the standard error), which largely depends on sample size (see Egger, Smith, Schneider, & Minder, 1997). If there is asymmetry, the regression line does not run through the origin and the intercept significantly deviates from zero.

Results

A meta-analysis consisting of 22 independent studies ($N = 5764$) yielded an overall mean effect size of $d = .12$, $p < .001$, indicating that aftercare has a small and positive effect on recidivism, compared to juveniles and young adults receiving no treatment or care as usual after incarceration. An overview of the 22 studies and their respective effect sizes can be found in Appendix A. The effect sizes ranged from Cohen's $d = -0.67$ to 0.81.

The fail-safe N was 513, which is far above Rosenthal's (1994) critical value of 120 studies [22 * 5 +10], indicating that this meta-analysis is robust to publication bias. Possible publication bias was also examined by testing funnel plot asymmetry. The standard normal deviate was regressed against the estimate's precision. As the intercept did not significantly deviate from zero ($t = 0.502$, $p = .621$), there was no indication of funnel plot asymmetry and therefore no indication of publication bias.

The test of homogeneity revealed the set of effect sizes to be heterogeneous; Qw (21) 476.38, $p = .000$. Hence, moderators were analysed in the next section, to establish which variables are responsible for differences among effect sizes. Outcomes are described by type of moderator, continuous (see Table 1) or categorical (see Table 2), and sample, study, and treatment characteristics.

Continuous moderator analysis

Sample characteristics. The mean age of participants was positively related to effect size ($\beta = .42$, $p = .000$), showing that aftercare had more effect in reducing recidivism for older youth than for the younger youth. Proportion minority did

moderate the effect size (β = .09, p = .048), indicating that studies with a larger proportion of participants with an ethnic minority background yielded larger effects. Proportion gang-involvement also proved to be a significant moderator (β = .54, p < .001), indicating that more gang-involvement was associated with larger effect sizes. Finally, a higher proportion of drug-abusers was negatively associated with effect size, β = -.22, p < .001, indicating that drug abuse was associated with less treatment success.

Treatment characteristics. The continuous moderators involving treatment characteristics were average treatment length (duration) and number of contacts a month (intensity). Only treatment intensity affected the effect size; a higher intensity of contacts with the youth by a professional yielded larger effect sizes, β = .27, p = .000.

Study characteristics. Five continuous moderators involving study characteristics were extracted from the studies involved. The year of publication was related to the effect size (β = .12, p = .008), with the more recently published studies yielding larger effect sizes than the somewhat older studies. The impact factor of the journal yielded a negative standardized regression coefficient of β = -.47, p < .001, which indicates that effect sizes were significantly smaller when the impact factor was larger. The quality of the study assessed by means of the Downs & Black Quality index was related to effect size as well, β = .13, p = .005. A better study quality was related to somewhat larger effect sizes. Finally, attrition had a negative impact on the effect size, for both the treatment (β = -.30, p = .000), and the control groups (β = -.15, p = .010), meaning that studies with samples that suffered more from attrition yielded smaller effect sizes.

Categorical moderator analysis

Sample characteristics. Within all studies, the majority of participants were male, except for one (Drake & Barnowski, 2006) in which the sample included females only. Additionally, there were mixed gender samples (51-95% males) and predominantly male samples (over 95% males). These two significantly differed in effect sizes (Q = 15.98, p < .001), mixed samples had somewhat smaller effect sizes (d = .07, p < .000) than male samples (d = .19 p < .001). Also, the type of index offense moderated the effect size; aftercare proved to be effective only if the sample was predominantly violent (index offense was violent, d = .29, p < .000), instead of predominantly non-violent (d = -.01, p = .480), Q = 42.97, p < .001. Likewise, samples that were categorized as 'high risk' yielded larger effect sizes (d = .18 p < .001) than samples with a moderate risk of recidivism (d = .07 p = .021), Q = 9.42, p < .002.

Treatment characteristics. Aftercare was directed at the individual, the system of the juvenile or young adult, or both the system and the individual. These different treatment modalities were related to the effect size, $Q = 117.84$, $p < .001$, accomplishing the greatest effect when aftercare focused solely on the individual ($d = .26$, $p < .001$). A smaller but still positive effect was achieved with systemic treatment ($d = .14$, $p < .001$), while a negative effect was found for treatments that combined an individual and systemic focus ($d = -.10$, $p = .000$). Subsequently there were three treatment approaches: individual treatment, group therapy or both individual and group therapy. These different treatment approaches yielded different effect sizes, $Q = 181.43$, $p < .001$. The largest effect was obtained with individual treatment, ($d = .22$, $p < .001$), yet when combined with group therapy the effect size was negative ($d = -.15$, $p < .001$). Furthermore, treatment modality and treatment approach significantly interacted ($Q = 246.80$, $p < .000$), which indicated that aftercare directed at the system and the individual through individual treatment yielded the largest effect, ($d = .44$, $p < .001$), whereas aftercare directed at the system and the individual through individual and group therapy yielded a negative effect ($d = -.23$, $p < .001$). Also, treatment that focused exclusively on the youth yielded larger effects when it was delivered as individual treatment ($d = .23$, $p < .001$) than as both individual treatment and group therapy ($d = .21$, $p < .001$). System focused treatment through individual counseling had a small and positive effect ($d = .14$, $p < .001$).

Study characteristics. Study design was significantly related to effect size ($Q = 6.45$, $p = .040$). Quasi-experimental designs with matched control groups ($d = .10$, $p < .001$) or non-matched control groups ($d = .17$, $p < .001$) yielded larger effects than randomized controlled trials ($d = .08$, $p = .005$). Furthermore, the source of the publication was related to effect size as well, $Q = 76.42$, $p = .040$. Articles in journals ($d = .15$, $p < .001$) and dissertations ($d = .14$, $p < .001$) yielded larger effect sizes than research reports ($d = .08$, $p = .001$). Studies of well implemented aftercare interventions yielded larger effect sizes ($d = .19$, $p < .001$) than studies that reported implementation difficulties, which even yielded negative effect sizes ($d = -.10$, $p < .001$), $Q = 81.82$, $p < .001$. The length of follow-up time to measure recidivism predicted effect sizes as well, $Q = 43.98$, $p < .001$, yielding larger effect sizes when the follow-up time was shorter. Effect sizes based on data acquired before 12 months after the release of participants were significantly larger ($d = .50$, $p < .001$) than effect sizes based on data acquired one year after release or later ($d = .09$, $p < .000$). These results indicate that aftercare has a strong short-term effect on recidivism, but on the long-term the advantage of the treatment group in contrast with the control group disappears. When the control group was untreated, effect sizes were significantly larger ($d = .27$,

p <.000) than when the control group received 'care as usual' (d = .11, p <.000), Q = 14.84, p <.000.

Discussion

The purpose of this meta-analytic review was to examine the effectiveness of aftercare programs for juvenile and young adult offenders. Overall, aftercare has a small and positive effect on recidivism compared to control groups receiving 'care as usual' or no treatment. Moderator analyses of sample, treatment and study characteristics showed that aftercare is most effective when it is well implemented and consists of intensive individual treatment aimed at older youths, at high risk of recidivism. Commencing aftercare before the youth re-enters society does not increase the effectiveness of the program. Moreover, the age of first arrest and number of prior arrests are not related to the program effectiveness either.

The present study showed that aftercare programs are most suitable for offenders generally at high risk of recidivism, such as ethnic minority groups (due to the conflation of minority status and poverty) (Lewis, 2010) and youth involved in gangs (Thornberry et al., 2003).

The finding that drug abuse is associated with smaller effect sizes seems inconsistent with the finding that aftercare is more effective in groups that are at increased risk for recidivism. Considering the relatively large proportion of juvenile offenders reporting regular drug-use and the strong link between drugs and crime (e.g., Catalano, 1989; Elliott, Huizinga, & Ageton, 1985; Jones & Sims, 1997; Mills, Kroner, & Hemmati, 2003), the development of an aftercare program, or at least particular treatment modules with a focus on substance abuse, is likely to be a valuable contribution to policy and practice. An example is Multidimensional Family Therapy (MDFT), which has been found effective in reducing drug abuse and delinquency and could be adapted and implemented as (part of) an aftercare program (Hogue, Liddle, Becker, & Johnson-Leckrone, 2002; Liddle, 2004; Liddle et al., 2010).

The finding that effectiveness increases with age is inconsistent with research showing that younger adolescents benefit more from interventions targeting criminogenic factors (Van der Put et al., 2012). However, the finding that aftercare is still effective in late adolescence and early adulthood is in line with the assumption that moral, social and identity development continue into young adulthood (Arnett, 2000; Zimmerman, 2005), implying that juveniles in late adolescence and young adults should be able to profit from treatment of criminogenic factors, because they are still relatively open to change. In addition, the

effect of age could also be attributed to natural desistance during young adulthood, as shown by the age crime curve (Farrington, 1986). Also, when the index offense was considered, we found that aftercare was more effective in predominantly violent samples than in non-violent samples. This is not surprising considering previous research on type of crime and recidivism, suggesting that property offenders (non-violent) are more likely to reoffend (Armstrong & Altschuler, 1982; Langan & Levin, 2002; Lattimor, Krebs, Graham, & Cowell, 2005).

The age of first arrest and the number of prior arrests do not have an impact on the effect size. This finding contradicts research indicating that an early onset and multiple prior offenses increase the risk of recidivism (Loeber & Farrington, 2001; Moffitt, 1993).

This meta-analytic review showed that the duration of the aftercare program is of lesser importance that the intensity of the treatment. Consistent with some previous research (Fagan, 1995; Winokur et al., 2008), treatment duration did not moderate the effect size. Yet, the number of contacts between youth/their parents and a mentor/supervisor was related to the effect size, predicting a larger effect size when the frequency of contacts a month increased. Our findings confirmed previous research showing that intensive treatment provided to a high-risk population reduces recidivism (Andrews et al., 1990; Andrews & Bonta, 2010; Lipsey 1995).

Aftercare interventions appear to be most effective in decreasing recidivism when they focus on the individual offender, while a focus on the social system yields smaller, but still positive effects. If an intervention is focused on both the individual and the system of the youngster, however, the effect on the outcome is negative. This result indicates that aftercare interventions should focus on one aspect, preferably on the client him/herself, rather than incorporating system interventions into the program at the same time as treating the offender individually. Due to the transition from adolescence to young adulthood, systems, such as the family or school system, start to play a less central role in the life of young people referred to aftercare. The decrease in the relative importance of these systems could explain why systemic treatment is somewhat less successful for youngsters in late adolescence and early adulthood. Perhaps interventions aimed at this older age group should shift their focus to the individual level to increase effectiveness (i.e. Cottrell & Boston, 2002; Sexton & Turner, 2010; Van der Put et al., 2012).

This study also revealed that individual treatment was the most effective in reducing recidivism. Notably, this effect disappeared and even sorted a negative effect when individual treatment was combined with group therapy. Although group therapy is often used in treatment programs targeting juvenile delin-

quency, results from both this meta-analysis and previous research provide little support for the effectiveness of group-based interventions (Henggeler, 1989; Lipsey, 2006). Moreover, Dishion, McCord and Poulin (1999) even found that adolescents tend to show increases in criminality after joining group interventions, most likely because of peer reinforcement of criminal thinking and behavior. This issue is prevented by individual treatment and, moreover, creates the opportunity to take personal characteristics into account and meet the unique needs of individual participants, which is consistent with the *needs*- and *responsivity*-principles of the RNR-model (Andrews et al., 1990). It is worth noting that while individual therapy appears to be more effective than group therapy for this population, it is also generally more expensive. Yet, individual therapy might be more cost effective, considering the differences in effect size this study showed.

Furthermore, aftercare yielded more positive outcomes when control groups did not receive intervention than when they received 'care as usual', which is consistent with previous studies, indicating that the effects of aftercare are also generated through general principles that may contribute to treatment success, such as client-therapist alliance, instead of only the specific treatment method (Barber et al., 2000; Lambert & Barley, 2001; Martin, Garske, & David, 2000).

Additionally, the present study showed that there were no differences between aftercare programs starting during or after detention. One explanation may be that we included only few studies that examined aftercare during detention. Another possible explanation could be that youth negatively associate aftercare with the correctional facility, where the low sense of agency and reduced autonomy is often inevitable (Ashkar & Kenny, 2008).

This meta-analysis found moderator effects for study design favoring the less robust, quasi-experimental designs. Weisburd and colleagues (2001), and more recently, Welsh and colleagues (2010) found similar results, indicating that studies using more rigorous research designs were less likely to report strong effect sizes. However, Lipsey (2003) cautioned for a premature conclusion that "non-randomized designs are biased upwards" (p. 74), because effect sizes are significantly related to other moderators as well, which can only be examined by means of careful multivariate analysis. Furthermore, Shadish and his colleagues (2000) showed that therapy effects can be underestimated in quasi-experimental studies, due to a self-selection bias, referring the more distressed clients to the treatment group, resulting in pre-test differences between the treatment and control groups.

The finding that the impact factor of the journal is negatively related to the effect size indicates that the smaller the effect size, the higher the impact factor. On the other hand, the methodological study quality was positively associated

with effect size, indicating that the higher the methodological quality of the study, the higher the effect size. This could indicate that the highest quality studies are not necessarily published in journals with the highest impact factor. However, it is important to be aware that the Downs & Black (1998) criteria checklist is an extensive checklist, examining 24 study quality criteria, of which study design is just one. These criteria are consequently not necessarily related to the impact factor of the journal, nor to the outcomes for study design. Moreover, the quality of implementation of aftercare was strongly associated with recidivism. Well-implemented aftercare interventions result in greater treatment integrity and, as was shown, predict larger, positive effect sizes, whereas studies that reported implementation difficulties yielded negative effects, which is similar to results found in previous studies (Lipsey, 1995, 2009; Wilson, Lipsey, & Soydan, 2003). However, this result should be interpreted with care, because the majority of the included studies did not document the quality of implementation well and the quality often depends on the extent to which the researcher was involved in the delivery of the intervention (Lipsey, 2009).

Next, the study characteristics year of publication, length of follow-up time and attrition did affect effect sizes as well. First, more recent published studies had better outcomes than older studies. This could be the result of the increase in implementation of evidence-based programs (Aos, Miller, & Drake, 2007; Bettman & Jasperson, 2009; Chance, et al., 2010; Farrington & Welsh, 2005b). Second, the length of follow-up time negatively affected the effect size. Follow-up data collected after 12 months or more after release had smaller effect-sizes. This finding indicates that aftercare has a strong short-term effect that fades out over time. Previous research on serious juvenile offenders also often found that treatments (such as behavioral parent training, cognitive-behavioral therapy and skill-oriented treatments) failed to yield favorable long-lasting effects (Bank et al., 1991; Deković et al., 2011; Weisz, Walter, Weiss, Fernandez, & Mikow, 1990). Finally, attrition had a negative impact on the effect sizes. We could not establish whether attrition was selectively based on the information provided by the studies included in this meta-analysis. However, considering that attrition proved to be associated with smaller effect sizes, attrition may have biased the results.

Limitations and future directions

This meta-analytic study had some limitations related to the quality and characteristics of the included studies. First, frequency and type of crimes the juveniles and young adults committed post-release were not registered consistently and could not be included as a moderator. This is a drawback, since the success of aftercare is not only related to recidivism (yes/no), but should also be considered

in light of frequency and seriousness of subsequent offenses. A positive outcome might also be less frequent and/or less serious recidivism. Some studies did report the time to first re-arrest and/or the number of re-arrests (Bouffard & Bergseth, 2008; Braga et al., 2009; Cillo, 2001; Deschenes & Greenwood, 1998; Fagan, 1990; Greenwood et al., 1994), but only one study reported changes in severity of criminal behavior before and after treatment (Rowland, 2007). A second limitation of this meta-analysis was that psychopathology could not be tested as a moderator, because the included studies did not report on psychopathology. Research has shown that, compared to the general population, the prevalence of psychopathology, such as ADHD, depression, anxiety disorders and PTSD, is disproportionately high in young offenders (e.g., Vermeiren, 2003). Thirdly, samples that received a treatment program that was combined with supervision were more likely to be subject to greater levels of surveillance by the police and probation officers, which may in turn increase the likelihood of further offending being detected. It could also increase the level of technical violations that might questionably be considered as recidivism, and lead to increased levels of re-arrest and re-conviction, which may have negatively influenced the effect size of several included interventions (Byrne, Lurigio, & Petersilia, 1992; Gray et al., 2005; Worrall & Walton, 2000).

Finally, to increase the statistical power of the moderator analyses, all analyses were conducted with the fixed instead of the random effect model, somewhat limiting the generalizability of the results. We post-hoc reran all analyses using the random effect model in order to examine whether results were very different from the fixed effect model results, but this proved not to be the case. Effect sizes were generally of the same magnitude in the random effect model. Moderators that proved to be significant in the fixed effect model, however, mostly failed to reach significance in the random effect model due to lack of statistical power.

In summary, the objective of this meta-analytic review was to assess the effects of aftercare on recidivism in juvenile and young adult offenders released from correctional institutions. Results obtained show that overall aftercare programs had a small and positive effect on reducing recidivism of juvenile and young adult offenders. We do need to be cautious about drawing conclusions from these general findings. The target group focused upon is heterogeneous and consists mainly of a high-risk group of troubled, serious delinquent youths, where success rates can be expected to be limited. Their criminal activities are not likely to be reduced to zero after treatment and aftercare intervention(s). Reducing the harm caused due to the decreased frequency and nature of their repeat offense(s) should also be considered as a success.

Several other implications for practice and future research follow from the results of this study. First, like other interventions aiming to decrease recidivism, aftercare programs should be based on *What Works* principles, thus the largest effects can be expected when individual needs and high-risk youths are targeted, in accordance with what juvenile justice experts and previous studies suggest (Altschuler & Armstrong, 2001; Andrews et al., 1990; Lipsey & Wilson, 2000). Second, aftercare programs should be properly implemented, practitioners should be well trained, adhere to the specific program elements and the number, duration and content of contacts (Lipsey, 2009). In order to monitor this, more studies should focus on the implementation of interventions through process-evaluations of aftercare programs to establish whether they are implemented and carried out as intended. Without this, it may be difficult to establish whether the specific program is responsible for the outcomes or if other factors moderate or mediate the results.

In conclusion, it has become clear that aftercare programs have a positive short-term impact on recidivism, especially individual aftercare interventions aimed at high-risk older, male youths. Yet, more rigorous, experimental studies including a longer follow-up period are needed to show the true and lasting effects of aftercare programs for juvenile and young adult offenders that reenter our society after spending time in detention.

Table 1. ***Linear Regression Analysis for Continuous Moderator Variables (Fixed Effect Model)***

Moderator variables	N_winsorized	*k*	Beta	Z	*p*
Mean Age	4595	22	.42	9.16	.000
Age of First Arrest	1492	9	.07	1.01	.312
Number of Prior Arrests	1376	9	.09	1.36	.173
Proportion Minority	4595	22	.09	1.97	.048
Proportion Gang involvement	1642	8	.54	6.03	.000
Proportion of Drug Abusers	2356	14	-.22	-3.73	.000
Treatment Duration	3683	19	-.09	-1.46	.143
Treatment Intensity	2543	14	.27	5.01	.000
Publication Year	4595	22	.12	2.66	.008
Impact of Journal	2134	8	-.43	-7.87	.000
Study Quality	4595	22	.13	2.84	.005
Attrition experimental group	3450	14	-.30	-5.22	.000
Attrition control group	3450	14	-.15	-2.58	.010

Table 2. ***Univariate Analysis of Variance for Categorical Moderator Variables (Fixed Effect Model)***

Moderator variables	Number of respondents, N_winsorized	Number of studies *k*	Effect size *d*	*p*	95% confidence interval	Q statistic between studies	*p*	Q statistic within studies	*p*
Overall	4595	22	.12	.000	.09 to .15			476.38	.000
Proportion Males in Sample						15.98	.000		
Mixed sample 50 – 95%	2500	10	.07	.000	.03 to .11			341.93	.000
Male sample > 95%	1939	11	.19	.000	.14 to .23			118.47	.000
Predominant Index Offense						73.69	.000		
Violent	1176	6	.29	.000	.24 to .35			42.97	.000
Non-violent	2351	11	-.01	.480	-.05 to .03			271.02	.000
Recidivism Risk Rating						9.42	.002		
Moderate	1137	6	.07	.021	.01 to .13			38.53	.000
High	2527	10	.18	.000	.14 to .22			176.18	.000
Treatment modality						67.70	.000		
Systemic	736	2	.14	.000	.07 to .22			25.29	.000
Individual	2355	11	.26	.000	.21 to .30			105.08	.000
Both	1504	9	-.10	.000	-.16 to -.05			228.17	.000
Treatment design						181.43	.000		
Individual treatment	2871	14	.23	.000	.19 to .26			147.94	.000
Group therapy & individual therapy	1503	7	-.15	.000	-.20 to -.10			147.01	.000
Treatment Combination						246.80	.000		
Systemic / individual treatment	736	2	.14	.000	.07 to .22			25.29	.000
Individual / individual treatment	1838	8	.23	.000	.18 to .27			79.71	.000
Individual / individual treatment and group therapy	296	2	.21	.000	.10 to .33			1.97	.000
Systemic & Individual / individual treatment	297	4	.44	.000	.33 to .56			24.54	.000
Systemic & Individual / individual treatment and group therapy	1207	5	-.23	.000	-.29 to -.18			98.07	.000
Start before release						.02	.877		
Yes	2902	16	.12	.000	.08 to .16			355.86	.000
No	1245	4	.13	.000	.07 to .18			120.43	.000
Study Design						6.45	.040		
RCT	1270	9	.08	.005	.02 to .14			111.91	.000
Matched control group	1486	6	.10	<.000	.05 to .15			81.77	.000
Quasi-experimental	1839	7	.17	.000	.12 to .21			276.24	.000
Publication Source						6.42	.040		
Article in journal	2138	8	.15	.000	.11 to .20			331.57	.000
Report	1899	12	.08	.001	.03 to .12			85.20	.000
Dissertation	562	2	.14	.001	.06 to .23			53.18	.000
Implementation						64.87	.000		
Does not mention implementation quality	1507	6	.20	.000	.15 to .25			311.87	.000
Assessed implementation, well implemented	1768	9	.19	.000	.14 to .24			50.22	.000
Assessed implementation, reported difficulties	1320	7	-.07	.000	-.12 to -.01			49.42	.000
Time of Last Follow-up						43.98	.000		
< 12 months	302	3	.50	.000	.38 to 61			14.89	.000
≥ 12 months	4293	19	.09	.000	.06 to .12			417.51	.000
Nature of Control group						14.84	<.000		
No treatment	352	4	.27	.000	.19 to .33			17.98	<.000
Care as Usual	4012	14	.11	.000	.07 to .15			397.98	.000
Pre-differences between treatment and control						2.51	.113		
Yes	2109	12	.06	.000	.02 to .11			275.21	.000
No	2024	9	.12	.003	.07 to .16			164.29	.000

Appendix A: Studies included in the meta-analysis

1. Study characteristics

No.	Study	Year	Publication source	Design	Follow-up in months	Outcome measure	Quality index score	Effect Size
1	Aos	2004	Report	Quasi-exp.	18	(Violent) Felony convictions and misdemeanors	16	0.39
2	Barton et al.	2008	Report	Matched CG	12	Recidivism; other post-release outcomes	19	-0.42
3	Barton et al.	2008	Report	Matched CG	12	Recidivism; other post-release outcomes	18	0.12
4	Barton et al.	2008	Report	Matched CG	12	Recidivism; other post-release outcomes	19	0.03
5	Berghseth and McDonald	2007	Report	Quasi-exp.	16	Re-arrests	21	0.15
6	Bouffard and Bergseth	2008	Journal	Quasi-exp.	6	Follow-up YLS/CMI scores; Urinalysis; (number of) new official contacts	23	0.32
7	Braga, Piehl and Hureau	2009	Journal	Matched CG	36	Re-arrests, time to re-arrest, type of re-arrest crime	22	0.40
8	Cillo	2001	Dissertation	RCT	3	Recidivism; Behavioral and Emotional Rating Scale	21	0.81
9	Drake & Barnowski	2006	Report	Matched CG	36	(Violent) felony and misdemeanor conviction; cost-analysis	16	0.11
10	Fagan	1990	Journal	RCT	24	Recidivism and social outcomes	24	0.54
11	Gray, et al.	2005	Report	Quasi-exp.	24	Re-conviction; views of staff, youth and their families on the effectiveness of ISSP	24	0.11
12	Greenwood, et al.	1993	Report	RCT	12	Re-arrests & reconvictions	27	0.00
13	Greenwood, et al.	1993	Report	RCT	12	Re-arrests & reconvictions	27	0.30
14	Josi and Sechrest	1999	Journal	Quasi-exp.	12	Re-arrests	27	0.57
15	Lane et al.	2005	Journal	RCT	18	Re-arrest; reconvictions and intervention intensity	22	-0.11
16	Rowland	2007	Dissertation	Matched CG	12	Recidivism; Crime Severity Index (CSI); parole revocation; family functioning	20	0.00
17	Sealock et al.	1997	Journal	Quasi-exp.	18	Re-arrests and adjudications, number and proportion	19	-0.67
18	Sontheimer and Goodstein	1993	Journal	RCT	9	Re-arrests	25	0.36
19	Unruh et al.	2009	Journal	Quasi-exp.	24	Re-conviction/adjudication	20	0.38
20	Wiebush et al.	2005	Report	RCT	12	Re-arrests; re-conviction; re-incarceration; type of offense	28	0.14
21	Wiebush et al.	2005	Report	RCT	12	Re-arrests; re-conviction; re-incarceration; type of offense	28	-0.21
22	Wiebush et al.	2005	Report	RCT	12	Re-arrests; re-conviction; re-incarceration; type of offense	28	0.12

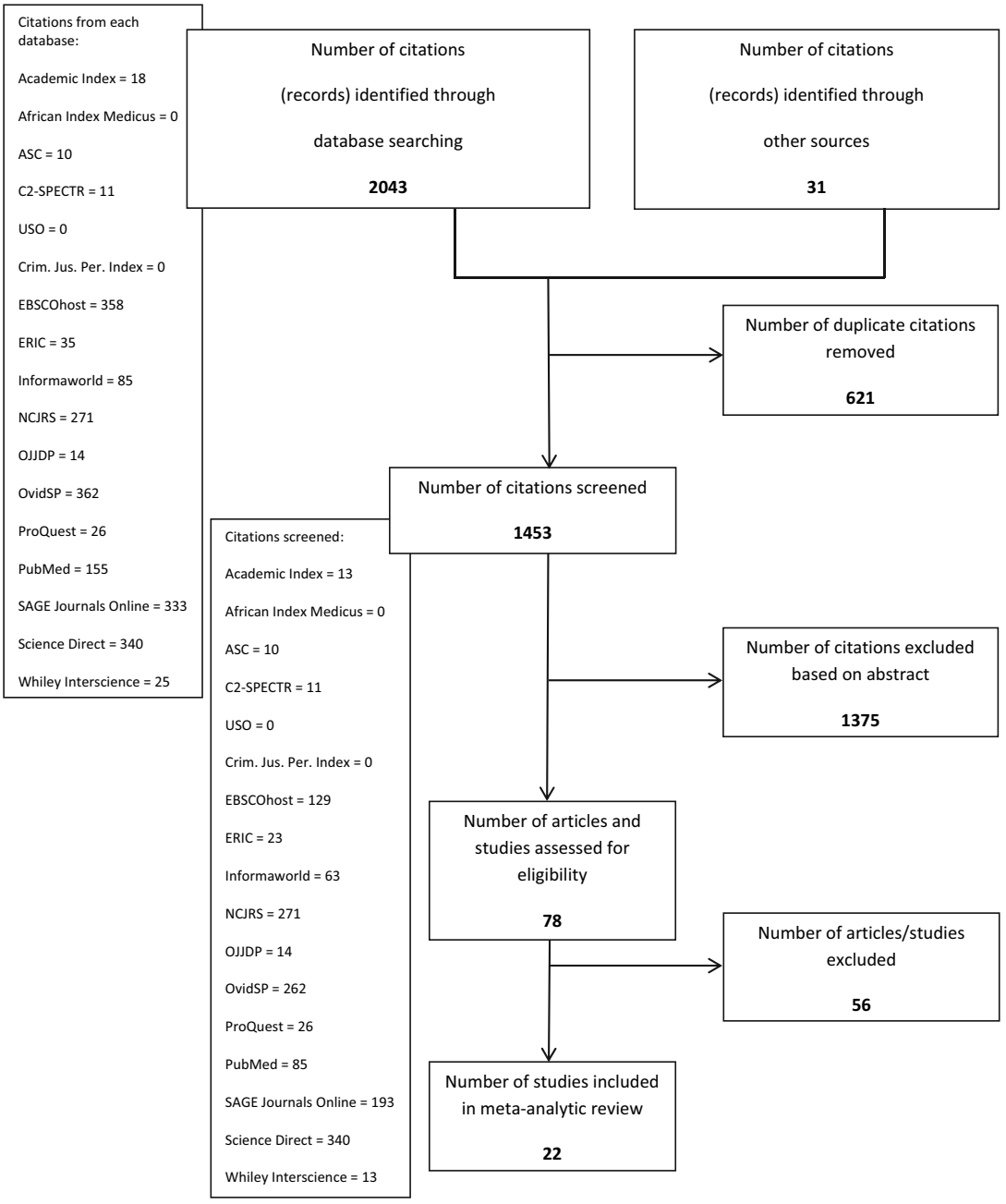
2. Sample Characteristics

No.	Study	Mean age	Prop. male	Prop. minority	Age 1st arrest	Nr. of Prior Arr.	Proportion Gang Inv.	Proportion Drug Abusers	Recidivism Risk	Predominant index offense
1	Aos	16.4	83%	32%	12.9					
2	Barton, et al. Alaska	17.2	94%	61%				82%	high	non-violent
3	Barton, et al. Arkansas	16.1	78%	70%				53%	low-moderate	violent
4	Barton, et al. Wisconsin	16.8	100%	83%				39%	low-moderate	violent
5	Berghseth McDonald			92	92				116	116
6	Bouffard & Bergseth			63	49				112	112
7	Braga, Piehl & Hureau	143	309	108	309	35	0		417	417
8	Cillo			50	50				100	100
9	Drake & Barnowski	78	78						156	156
10	Fagan	122	105	52	24	70	81		76	76
11	Gray et al.	588	703	109	183	324	343		292	292
12	Greenwood, et al. Detroit	50	47	29	22	21	25		51	51
13	Greenwood, et al. Pittsb.	46	40	33	23	13	17		56	56
14	Josi & Sechrest	115	115	106	115	9	0		221	221
15	Lane et al.	264	275	226	236	38	39		462	462
16	Rowland	643	643	621	621	22	22		1242	462
17	Sealock et al.	298	222	162	132	136	90	43%	426	426
18	Sontheimer & Goodstein	53	53	44	46	9	7		90	90
19	Unruh et al.	320	620	320	531	0	19		851	462
20	Wiebush et al. Colorado	82	68	67	51	15	17		118	118
21	Wiebush et al. Nevada	120	127	100	120	20	7		220	220
22	Wiebush et al. Virginia	74	44	63	34	11	10		97	97

3. Sample size

No.	Study	Original *N* exp.	Original *N* contr.	Final *N* exp.	Final *N* contr.	Attr. exp.	Attr. contr.	Drop out %	Final *N*	*N* wins
1	Aos	105	169	105	169				274	274
2	Barton et al. Alaska	84	64					42%	148	148
3	Barton et al. Arkansas	83	89	172				22%	172	172
4	Barton et al. Wisconsin	81	50	131				27%	131	131
5	Berghseth and McDonald			92	92				116	116
6	Bouffard and Bergseth			63	49				112	112
7	Braga, Piehl and Hureau	143	309	108	309	35	0		417	417
8	Cillo			50	50				100	100
9	Drake and Barnowski	78	78						156	156
10	Fagan	122	105	52	24	70	81		76	76
11	Gray et al.	588	703	109	183	324	343		292	292
12	Greenwood, et al. Detroit	50	47	29	22	21	25		51	51
13	Greenwood, et al. Pittsb.	46	40	33	23	13	17		56	56
14	Josi and Sechrest	115	115	106	115	9	0		221	221
15	Lane et al.	264	275	226	236	38	39		462	462
16	Rowland	643	643	621	621	22	22		1242	462
17	Sealock et al.	298	222	162	132	136	90	43%	426	426
18	Sontheimer and Goodstein	53	53	44	46	9	7		90	90
19	Unruh et al.	320	620	320	531	0	19		851	462
20	Wiebush et al. Colorado	82	68	67	51	15	17		118	118
21	Wiebush et al. Nevada	120	127	100	120	20	7		220	220
22	Wiebush et al. Virginia	74	44	63	34	11	10		97	97

Appendix B: Flowchart of literature search and screening



Appendix C: Treatment description per study

1 Aos (2004) – Family Integrated Transition Program (FIT)

The program focuses on juvenile offenders with co-occurring substance abuse and mental health disorders. FIT combines several evidence based methods: Multisystemic Therapy (MST); Dialectical Behavior Therapy (DBT); Motivational Enhancement Therapy (MET) and Relapse Prevention/ Community Reinforcement. FIT is provided in the family home.

2, 3 and 4 Barton, et al. (2008) – The Boys & Girls Club of America Targeted Reentry (BDGCTR)

The BGCTR (IAP modeled) program focuses on needs by providing specific services. Within the residential facility BGCTR is incorporated into the daily programming (restorative justice, anger management, substance abuse awareness and refusal skills, prosocial skill development, leadership development, career development, vocational training and certification, academic enrichment, and social recreation). The youth develops, together with a facility treatment team, an individualized Transition Plan. The Transition Specialist assists the youth in establishing a Community Action Team of mentors and local service providers that will provide counseling, support, mentoring and assistance in meeting the goals of the Transition Plan. The youth is provided with a continuum of services. Transition Specialists work with the youth and their Community Action Team to identify and secure resources and services. Youth and their families participate in Boys and Girls Club programs.

5 Berghseth and McDonald (2007) – The Reentry Services Project (RSP)

The project include two Transitional Coordinators (TC's) who work with Probation Officers (PO's) and community-based service providers to identify case specific needs and employ comprehensive case management services. TC's have mentoring and surveillance related activities during contacts with the youth and parents. Youth are referred to appropriate community services, based on risk/ needs assessment.

6 Bouffard and Bergseth (2008) – Aftercare for Indiana through Mentoring (AIM)

AIM is an aftercare program for youthful offenders, which includes traditional reentry planning activities, as well as mentoring relationships. The program is similar to the IAP or SVORI models, including three-phase design, offender assessment, individualized case planning, case management components and it calls for the integration of supervision and treatment services.

7 Braga, Piehl and Hureau (2009) – The Boston Reentry Initiative (BRI)

The BRI requires inmates to develop a "transition accountability plan" that includes a wide range of "wrap-around" services customized to address their individual needs. Mentors frequently meet with inmates and after release they continue working with BRI participants to assist in acquiring basic needs, such as employment and adequate housing, continuing ongoing substance abuse and mental health treatment and avoiding the negative temptations of street life.

8 Cillo (2001) – The Westchester County Aftercare Program (WCAP)

The WCAP is an in-home transitional, community-based, family oriented aftercare program for adolescents. The child and the family are part of a treatment team comprising of a social worker, psychologist, psychiatrist and a probation officer. Together they create a 90-day treatment plan, comprising appropriate interventions consistent with the needs of the family, such as psychological counseling for child and family (including parent training), respite care, after-school activities and tutorial services.

9 Drake and Barnowski (2006) – The Juvenile Rehabilitation Administration (JRA) Mentoring Program

The JRA program recruits and trains adults from diverse cultural backgrounds to serve as mentors for Seattle youths returning from a JRA facility. A mentor is a trusted adult who volunteers to assist a youth in setting and fulfilling educational and vocational goals, and to help the youth live a drug- and crime free live. Mentors meet monthly with the youth during incarceration and weekly after release.

10 Fagan (1990) – Violent Juvenile Offender Program

The program reintegrated youth into the community through a continuity of services and interventions, control and supervision in the neighborhood and interventions that teach youth to live within the relatively unstructured and life in their neighborhoods. Theoretical principles of the program are social networking, provision of opportunities, social learning and goal orientated behaviors.

11 Gray, et al. (2005) – Intensive Supervision and Surveillance Program (ISSP)

ISSP is an intensive multi-modal (supervision & surveillance), community-based program and includes a highly structured program based on 'what works' research. Youths receive ISSP as a part of DTO received a program with five core supervision components: education and training; restorative justice; offending behavior; interpersonal skills and family support. There are ancillary modules available as well: accommodation work; mental health; drug or alcohol; constructive leisure/recreation; counseling/ mentoring and dealing with other health problems. In addition, there is at least one form of surveillance (tracking, electronic tagging, voice verification and/or intelligence-led policing).

12, 13 Greenwood, et al. (1994) – **The Skillman Intensive Aftercare Program**

The basic components of the Skillman Intensive Aftercare Program are prerelease contacts and planning with aftercare case-worker, the youth and the family; intensive supervision (several contacts a day for tracking, counseling, feedback, assistance); improving family functioning by counseling and linkages with other family sources; mobilizing and involving youths in appropriate education or work and social services and a case-worker that develops a positive relationship with parents and youth and functions as a role-model.

14 Josi & Sechrest (1999) – Lifeskills '95

Lifeskills'95 is an interactive aftercare treatment program designed to treat the improperly socialized offender by using a series of lifestyle and life skill treatment modalities in an integrated educational approach to healthy decision making. The treatment is based on 6 principles: efforts to stabilize the participant's length of parole by improving the basic socialization skills necessary for successful reintegration into the community; to significantly reduce criminal activity in terms of amount and seriousness; to alleviate the need for, or dependence on, alcohol or illicit drugs; to improve overall lifestyle choices (i.e., social, education, job training, and employment); to reduce the individuals need for gang participation and affiliation as a support mechanism; and to reduce the high rate of short-term parole revocations. The program underlies 13 counseling modules, including weekly meetings, lecture and a group discussion.

15 Lane, et al. (2005) – The South Oxnar Challenge Project (SOCP)

The SOCP includes family, victim and community involvement. SOCP staff work in teams (probation officers, service coordinators, child & family social workers, police officers, mentors, community workers, restorative justice advocates) to deliver services to the youth and their families. The team meet formally weekly, collaborate daily in coordinating services, providing treatment groups, community service and recreation opportunities. SOCP staff meet 2-3 times a week with youth and families.

16 Rowland (2007) – Functional Family Parole (FFP)

FFP is an family-oriented aftercare program developed from an evidence-based treatment Functional Family Therapy (FFT). FFP includes three phases: engaging and motivating; monitoring and support (parole counselor refers to community-service (evidence-based) interventions considering the needs of the family, as assessed in phase 1); generalizing (parole counselor helps to maintain changes made throughout the intervention by generalizing new skills).

17 Sealock, et al. (1997) – Intensive Aftercare Program (IAP)

Aftercare services are organized into 3 phases: pre-release (a family-therapist develops a family treatment contract which detailed the role and expectations of the family in the treatment process, and family support groups), intensive aftercare (intensive supervision and daily contacts, youth group meetings) and transitional aftercare (twice a week face-to-face contact with case-manager and twice a month with addiction counselor. In addition, youth are linked to community services, family therapy continued if needed).

18	**Sontheimer and Goodstein (1993) – Intensive Aftercare Probation Program for serious juvenile offenders**
	The IAP officer makes monthly visits during incarceration to youth and family to plan aftercare. After release this ranges from 3 to 1 visit (face-to-face) per week. IAP officers place strong emphasis on developing educational and/or vocational plans for youths, provide counseling services, and generally functioned as advocates for their clients. IAP officers develop relationships with the clients family to facilitate crisis intervention when needed. The IAP program has a strong treatment orientation as well as a surveillance function, inherent in the rather stringent reporting (contact) requirements.
19	**Unruh, et al. (2009) – SUPPORT**
	Project SUPPORT provides incarcerated youth with disabilities with either a designated special education disability and/or mental health disorder, with pre-release training and coordinated planning. The components for this intervention are structured around features identified as effective for youth with emotional and behavioral disorders and include: (a) strategies to enhance self-determination skills in the youth with services focused on the unique needs, interests, strengths, and barriers of the youth; (b) competitive job placement; (c) flexible educational opportunities; (d) social skill instruction; and (e) immediate service coordination of wrap-around services. Services are provided collaboratively with staff from the three agencies along with community support agencies: (a) vocational rehabilitation counselor, (b) treatment manager, (c) parole officer, and (d) facility and community education staff. The initial responsibility of the transition specialist is to define each youth's strengths, needs, interests, and life goals to develop a transition plan with services aligned to the unique needs and interests of each project participant.
20, 21 and 22	**Wiebush, et al. (2005) – The Intensive Aftercare Program (IAP)**
	IAP is based on a theoretical model that integrates strain, social learning, and social control theories. The model combines intensive supervision with services after institutional release, with a focus on reintegration during incarceration and a highly structured and gradual transition between institutionalization and aftercare. Some of the model's key elements are the following: individualized case planning; continuity in case management and services during various program phases; cooperation between institutional and aftercare staff; formal transition structures, processes and programs; intensive supervision; use of rewarding system to respond to youth's behavior.