Bilaga 1 Tabeller

Tabelleringen är skriven på engelska och innehåller information om studiedeltagare, det utvärderade programmet, kontrollalternativet, resultat för relevanta utfall, design, hur man mätt utfallsmåtten samt om programmet är inkluderad i något internationellt register. Informationen om studiedeltagarna (t ex antal, ålder och kön) är baslinjeinformation det vill säga en sammanställning av de data som samlades in vid inledningen av studien. Information om programmets och kontrollalternativets komponenter, duration, intensitet samt utförarnas träning bygger på den information som angetts i studierna. Vi har alltså inte utgått från hur respektive program utförs enligt andra källor utan helt utifrån författarnas beskrivning av tillvägagångssättet. Resultaten från studierna redovisas utifrån relevanta utfallsmått. För dikotoma utfallsmått beräknades riskskillnader (RD) eller riskkvot (RR) och 95 procents konfidensintervall. För utfallsmått angivna på en kontinuerlig skala beräknades medelskillnad (MD) och standardiserade medelvärdesskillnader (SMD) samt 95 procents konfidensintervall.

Internationella register

Varje studie redovisas även om programmet finns beskrivet och utvärderat i något av följande internationella register: National Registry of Evidence-Based Programs and Practices (NREPP), California Evidence-Based Clearinghouse, Blueprints for Healthy Youth Development och Office of Juvenile Justice and Delinquency Prevention (OJJDP).

Dessa internationella register har gemensamt att de genomför kvalitetsgranskningar av den forskning som finns för ett visst program och redovisar styrkan i det vetenskapliga stödet. Hur detta beskrivs varierar dock mellan de olika registren. NREPP använder en skala mellan 0-4,där en högre skattning innebär ett starkare vetenskapligt stöd för programmet. California Evidence-Based Clearing house använder en skala mellan 1-5 där 1 innebär att det finns ett starkt stöd för programmet, 2 att det finns stöd för programmet, 3 att programmet är lovande, 4 att man inte hittar några effekter, och 5 att det kan finnas risker med att använda programmet.

Blueprints for Healthy Youth Development använder tre olika kategorier: ”Promising program” (det ska bland annat finnas minst en välgjord randomiserad studie eller två välgjorda kvasiexperimentella studier som indikerar positiva effekter), ”Model program” (minst två välgjorda randomiserade studier eller en välgjord randomiserad studie plus en välgjord kvaliexperimentell studie som visar positiva effekter efter 12 månader), och ”Model plus program” (inkluderar även ett krav på en oberoende välgjord replikerande studie). OJJDP graderar sina program som antingen effektiva, lovande eller inga effekter. Skillnaden mellan dessa register och SBU:s vetenskapliga underlag är att registren ofta inkluderar andra eller bredare målgrupper och ett annat kontext jämfört med de snävare urvalskriterier som vi har i kunskapsunderlaget.

Mode Deactivation Therapy (MDT) vs. Dialectical Behavioral Therapy (DBT)	
Reference Country	Apsche JA, Bass CK, Houston MA. A one year study of adolescent males with aggression and problems of conduct and personality: A comparison of MDT and DBT. International Journal of Behavioral Consultation and Therapy 2006;2(4):544-552. USA
Participants	**Eligible**: male adolescents at residential care referred for anger, aggressions, and externalizing problem behaviors **Non-eligible**: no info **Sample**: n=20; mean age 16 (15-18 y); gender: 100% male; conduct disorder 55%; oppositional defiant disorder 30%; post-traumatic stress disorder 60%; major depression 5%; mixed personality disorder 35%; borderline personality traits 35%; narcissistic personality traits 15%; dependent personality traits 15% **Setting**: residential treatment center, USA **Study period**: pre 2006, no further information
Intervention Number of participants	**Components** Psychotherapeutic approach that addresses dysfunctional emotions, maladaptive behaviors and cognitive processes and contents through a number of goal-oriented, explicit systematic procedures. Integrates principles from DBT and Cognitive behavioral therapy. Built on mastery system using workbook and audiotapes based on individual learning style. Aims to experiencing success, and undertake difficult materials. Individuals need to be aware of negative verbalizations and thoughts, and record them in workbook. Through the Case Conceptualization, workbook, and audiotapes, the youngster systematically address underlying traits of personality. Functional teams assisting the client to master and implement curriculum. Imagery and relaxation to facilitate cognitive thinking and balance training. **Duration and intensity**: 12 months, no further info. **Staff education and training**: Therapists shared the comparable professional degrees, training and clinical experience in each of the two methodologies; the MDT group therapists were trained by the creator and developer of MDT (first author); training and supervision was provided by a doctorate level clinician. **Treatment fidelity**: efficacy study, high fidelity assumed. **Participants**: 10 allocated; 10 evaluated at 3 and 6 months
Comparison Number of participants	**Components** Dialectical Behavioral Therapy (DBT) is a modified form of Cognitive behavioral therapy and consisted of weekly individual therapy. No further information. **Duration and intensity**: weekly individual therapy during 12 months and at least one DBT skills group per week. **Staff education and training**: training in DBT at the official DBT training center, training and supervision of staff provided by a doctorate level clinician. **Treatment fidelity**: efficacy study, high fidelity assumed. **Participants**: 10 allocated; 10 evaluated at 3 and 6 months
Outcome results	**Depression (BDI-II) 3 month**: SMD -0.27 [-1.15, 0.61], MD -3.40 [-13.93, 7.13] m1=14.6, sd1=9.16, n1=10; m2=18, sd2=14.3, n2=10 **Depression (BDI-II) 6 month**: SMD -0.40 [-1.29, 0.49], MD -4.20 [-13.04, 4.64] m1=9.9, sd1=6.1, n1=10; m2=13.1, sd2=12.9, n2=10 **Suicidal ideation (SIQ-HS) 3** month: SMD -0.48 [-1.37, 0.42], MD -8.30 [-22.94, 6.34] m1=10.9, sd1=14.3, n1=10; m2=19.2, sd2=18.8, n2=10 **Suicidal ideation (SIQ-HS) 6 month:** SMD 0.37 [-0.51, 1.26], MD 4.11 [-5.19, 13.41] m1=7.0, sd1=7.2, n1=10; m2=2.89, sd2=13.16, n2=10
Outcome measures	BDI-II: The Beck Depression Inventory (revised 1996) designed to measure depression. SIQ-HS: Reynolds Suicidal Ideation Questionnaire - High School Form assessing change in suicidal ideation pre to post-treatment (higher ratings more ideation)
Study design	Randomized controlled trial (minimization method)
Notes	Incomplete data. Intervention description based on: Apsche JA et al. Mode deactivation: A functionally based treatment, theoretical constructs. The behavior analyst today 2003;3(4):455-459
Review and registers	Review: Excluded from James, Alemi et al., 2013 due to inconsistent information about important aspects of the method. Register on DBT: NREPP Borderline & eating disorder 3.2-3.7 (0-4). No register on MDT

Aggression Replacement Training (ART) vs. Usual Care (UC)	
Reference Country	Coleman M, Pfeiffer S, Oakland T. Aggression replacement training with behaviorally disordered adolescents. Behavioral Disorders 1992;18(1):54-66. USA
Participants	**Eligible**: behaviorally disordered adolescents age 12-18 years with aggressive behavior or other self-control problems **Non-eligible**: psychotic and functionally impaired individuals or individuals unstable from medication effects **Sample**: n=52; mean age: 6 (13-18 y); gender: 74% male; Primary DSM 111-R Diagnosis (conduct disorder 64%, major depression 13%, depressive disorder 3%, oppositional/defiant 10%, other 10%; polysubstance abuse 20%); intelligence (WAIS/WISC-R): m=94; R=64-126; achievement (Woodcock-Johnson Standard Scores): reading m=90, R=49-115, mathematics m=84, R= 63-111 **Setting**: Devereux Foundation-Texas Center in Victoria, Texas. Residential treatment for children and adolescents with behavioral disorders **Study period**: ≈1988-1991
Intervention Number of participants	**Components** Social skills components (structured learning): direct instruction, role-play, practice, and performance feedback, learning social skills. Anger control: learn to identify anger-producing stimuli (triggers) and their own developing angry responses (cues); learn and practice cognitive and relaxation techniques (anger reducers). Moral reasoning: promoted in group discussions of moral dilemmas, scenarios of real-life dilemmas in which no right and wrong answers are evident, discussions emphasize empathy and perspective-taking (assess situations from another's point of view). **Duration and intensity**: 10-week period, groups of 6 youths and 2 leaders providing role plays for structured learning situations. **Staff education and training:** 40 staff members (teachers, social workers, child care workers, supervisors, and administrators) trained during 3-day workshop; each staff learned all components. Workshop lead by university professor with extensive ART experience and with clients and staffs of residential treatment centers. **Treatment fidelity:** sessions observed on 2 occasions; positive and corrective feedback given; group leaders keep daily logs of sessions recording: absences, group management problems, or unusual circumstances. Logs indicate that homework was assigned and discussed in 65% of the sessions; leaders were asked to rate participation in each session and degree of overall success of the session (89 session logs, overall session effectiveness was moderate to high in 93% of sessions, and group participation was moderate to high in 90% of sessions). **Participants**: 36 allocated; 24 (66%) evaluated after the intervention
Comparison Number of participants	**Components** Participation in academic and vocational seventh period classes in small group settings. Probably usual care. **Duration and intensity**: no info. **Staff education and training**: no info. **Treatment fidelity**: no info. **Participants**: 16 allocated; 15 (93%) evaluated after the intervention
Outcome results	**Social situations (DST):** SMD 0.53 [-0.13, 1.18]; MD 4.40 [-0.89, 9.69] m1=24.8, sd1=8.2, n1=24; m2=20.4, sd2=8.2, n2=15 **ART Checklist:** SMD -0.01 [-0.66, 0.63]; MD -0.10 [-4.09, 3.89] m1=27.9, sd1=7.9, n1=24; m2=28.0, sd2=4.8, n2=15 **Socio-moral reflections (SRM):** SMD -0.48 [-1.13, 0.18]; MD -0.39 [-0.93, 0.15] m1=2.09, sd1=0.73, n1=24; m2=2.48, sd2=0.9, n2=15 **Self-control (SCRS)*:** SMD 0.12 [-0.52, 0.77]; MD 5.00 [-20.32, 30.32] m1=124, sd1=42.6, n1=24; m2=119, sd2=37, n2=15 **Behavioral incidents (BIR)**:** SMD 0.03 [-0.62, 0.67]; MD 0.19 [-3.78, 4.16] m1=3.25, sd1=6.8, n1=24; m2=3.06, sd2=5.7, n2=15
Outcome measures	DST: The Direct Situations Test, self-reported social skills. ART Checklist: staff rating social skills. SRM: Social-Moral Reflections Measure, level of moral reasoning. SCRS: The Self-Control Rating Scale, staff rating impulsiveness/self-control *higher ratings less self-control. BIR: Behavior Incident Report, average aggressive incidents during 3 weeks **higher ratings more aggressive incidents
Study design	Random assignment (RCT), no further information
Notes	Ambiguous results: completed in control group n=15 p.57 & table 2, but 4 lost p.57
Reviews and registers	Reviews: James, Alemi et al., 2013. Register: The California Evidence-based Clearinghouse: scientific rating: 3 (1-5) not institution. OJJDP: effective (not institution)

Aggression Replacement Training (ART) vs. Usual Care (UC)	
Reference Country	Currie MR, Wood CE, Williams B, Bates GW. Aggression replacement training (ART) in Australia: A longitudinal youth justice evaluation. Psychiatry, Psychology and Law 2012;19(4):577-604. Australia
Participants	**Eligible**: aggressive boys age 17-20 years serving at least a three-month custodial sentence for violent or violence-related offences, clinically judged cognitive ability, moderate to high level of criminogenic risk **Non-eligible**: self-reported history of psychotic symptoms in the last six months **Sample**: n=28; mean age: 19.6 (18-20 y); gender: 100% male. Years education m= 9.4; intact 2-parent family 74%; Axis I (depression, anxiety, or disruptive behavior) disorders 45%; convicted father 50%; convicted mother 5%; father or mother Axis I or II: 10%, (uncertain 25%). **Setting:** youth custody center located in Victoria, Australia **Study period:** 2005-2006
Intervention Number of participants	**Components** Skills training for effective social skills aimed at displacing aggressive behavior. Anger control training to reduce frequency of anger arousal and to teach techniques of self-control when anger is aroused. Moral reasoning training to facilitate progress of moral-cognitive development. **Duration and intensity**: 3 group training sessions per week over 10 weeks; sessions last for 1 hour and are co-facilitated. **Staff education and training**: ART facilitated by Principal Researcher (provisional psychologist) and colleague (Master of Social Work); principal researcher trained in ART, and main-trained for the first 10-week program; both had previous experience in CBT group therapy programs. **Treatment fidelity**: video footage sent to Washington State Aggression Replacement Training Quality Assurance Specialist; facilitators assessed for adherence to ART treatment model across multiple process and content domains; detailed qualitative corrective feedback and overall competency ranking for each ART component; facilitators maintained "competent" or "highly competent" throughout the program (ranking 1 and 2 on 4 ranks). **Participants**: 28 allocated; 20 (71%) evaluated after intervention and at 6 months
Comparison Number of participants	Pre-test data
Outcome results	**Aggression AQ post:** SMD -0.50 [-1.13, 0.13]; MD -12.90 [-28.56, 2.76] m1=89.35, sd1=24.51 , n1=20 ; m2=102.25, sd2=26.0, n2=20 **Aggression AQ 6 months:** SMD -0.79 [-1.44, -0.15]; MD -18.99 [-33.56, -4.42] m1=83.26, sd1=20.73 , n1=20 ; m2=102.25, sd2=26 , n2=20 **Cognitive distortion HIT post:** SMD -0.52 [-1.15, 0.11]; MD -0.39 [-0.84, 0.06] m1=2.78, sd1=0.76, n1=20 ; m2=3.17, sd2=0.7, n2=20 **Cognitive distortion HIT 6 months:** SMD -0.73 [-1.37, -0.09]; MD -0.59 [-1.08, -0.10] m1=2.58, sd1=0.88, n1=20 ; m2=3.17, sd2=0.7, n2=20 **Social problem solving SPSI-R post**: SMD 0.49 [-0.14, 1.12]; MD 1.44 [-0.34, 3.22] m1=12.72, sd1=2.94, n1=20 ; m2=11.28, sd2=2.8, n2=20 **Social problem solving SPSI-R 6 months:** SMD 0.53 [-0.10, 1.16]; MD 1.44 [-0.21, 3.09] m1=12.72, sd1=2.51, n1=20 ; m2=11.28, sd2=2.8, n2=20 **Aggression and rule breaking ABCL post:** -0.37 [-0.99, 0.26]; MD -3.30 [-8.78, 2.18] m1=52.5, sd1=9.5, n1=20 ; m2=55.8, sd2=8.14, n2=20 **Aggression and rule breaking ABCL 6 months:** SMD -0.44 [-1.07, 0.19]; MD -3.50 [-8.31, 1.31] m1=52.3, sd1=7.35, n1=20 ; m2=55.8, sd2=8.14, n2=20
Outcome measures	AQ: The Aggression Questionnaire, self-reporting. HIT: How I think questionnaire, self-reporting (low scores=high distortion). SPSI-R:S: Social Problem-Solving Inventory-Revised: Short form, self-reporting. ABCL: Adult Behavior Checklist, worker-reporting (only aggressive behavior and rule breaking behavior syndrome scales)
Study design	Non-randomized trial, pretest-posttest design, LOCF method for 3 (6m) and 6 (24m) lost to follow up
Notes	Waitlist planned but not completed. 24 months follow-up available in RevMan-database, not presented here
Reviews and registers	Reviews: no. Register: The California Evidence-based Clearinghouse, Scientific rating: 3 (1-5), not institution. OJJDP: effective (not institution)

Dialectic Behavior Therapy (DBT) vs. Usual Care (UC)

Reference country	Drake E, Barnoski R. Recidivism findings for the juvenile rehabilitation administration's dialectical behavior therapy program: Final report (Document No.06-05-1202) 2006. Olympia: Washington State Institute for Public Policy. USA
Participants	**Eligibility**: juvenile offenders with mental health issues transferred into state institution. Youths having multiple transfers were counted once per residential stay. **Non-eligible**: less than 14 days at unit **Sample**: n=128; mean age: 14.9 years at admission and 15.9 at release; gender: 74% female. Criminal history score m=15; Initial security classification assessment (ISCA) scores m=39.9; average stay 362 days **Setting**: Copalis Cottage, a mental health unit within JRA's Echo Glen Children's Center, eastern King County **Study period:** 1995-1999
Intervention number of participants	**Components** A cognitive-behavioral treatment for individuals with complex and difficult to treat mental disorders. DBT focuses on: (1) enhancing youths behavioral skills in dealing with difficult situations, (2) motivating youth to change dysfunctional behaviors, (3) ensuring new skills are used in daily institutional life, and (4) training/consultation to improve counselor's skills. DBT includes individual therapy and group skills training but is primarily delivered through daily interactions between unit staff and youth. Key components: skills training in small groups throughout the youth's stay; individual therapy (behavioral analysis, skills coaching, cognitive modification, exposure-based procedures, and contingency management) to change maladaptive behaviors; orienting families, parole counselors, and caseworkers to the new skills and demonstrates how to support and reinforce these new behaviors. **Duration and intensity:** throughout the youth's stay. No information on intensity. **Staff education and training**: individual therapy and group skills training conducted by counselors at Washington States juvenile rehabilitation administration (JRA). A DBT consultant was on site, and all cottage staff were trained. **Treatment fidelity:** staff received feedback during consultation to ensure they adhere to the DBT framework. **Participants**: 63 allocated (lived in the cottage in 1998-1999); 62 (98%) evaluated at 36 months
Comparison number of participants	**Components** Control group living in the cottage 1995-1997 before DBT was implemented. No further information. **Duration and intensity:** no info. **Staff education and training**: no info. **Treatment fidelity**: no info. **Participants**: 65 allocated (lived in the cottage in 1995-1997); 65 evaluated at 36 months
Outcome results	**Recidivism 36 months**: RR 1.03 [0.72, 1.48]; RD 0.02 [-0.16, 0.19]
Outcome measures	Recidivism: any offence committed after release
Study design	Historical control: pretest & posttest with different populations for each test
Notes	BT fully implemented 2000; No randomization, very poor design
Reviews and registers	Review: James, Stams et al 2013, Armelius & Andreasson, 2007. Register: NREPP Borderline and Eating disorder 3.2-3.7 (0-4)

Aggression Replacement Training (ART) vs. Usual Care (UC)	
Reference Country	Erickson JA. The efficacy of aggression replacement training with female juvenile offenders in a residential commitment program. Graduate thesis and dissertation. University of South Florida 2013. USA
Participants	**Eligible**: adolescent females, age 13-18 years, committed to juvenile justice program for ≥ 12 weeks **Non-eligible**: physical or mental impairments or language barriers affecting ability to actively participate, received ART in the past **Sample**: n=60; mean age: 17 (15-18 y); gender: 100% female; Violation of probation 73%; Larceny-petit theft 56%; Battery 53%; Larceny-grand theft 35%; Trespassing 15%; aggravated battery 13%; Disorderly conduct 13%. Majority had psychiatric disorders **Setting**: Frances Walker Halfway House a residential commitment program in Titusville, Florida **Study period**: ≈ 2010-2012
Intervention Number of participants	**Components** A cognitive-behavioral multimodal approach changing thinking, emotion, and action. ART curriculum facilitated by the trainer after initial assessments of the youths, teachers, and program specialists had been conducted and collected. Skill-streaming (the behavioral component): social learning procedures e.g., modeling, role-playing, performance feedback, and transfer training. 50 skills categorized: beginning social skills, advanced social skills, skills for dealing with feelings, skill alternatives to aggression, skills for dealing with stress, and planning skills). Anger control training (the emotion-targeted component): trainer demonstrates the proper use of core anger reduction techniques, guiding through anger management steps, provides feedback, and supervises the trainees' practice. Practice outside the group is recorded on a "Hassle Log," and a pictorial form. Moral reasoning training (the cognitive component): social decision making meetings, group members strive to make mature decisions concerning 10 specific problem situations designed to promote a mature understanding of moral values or decisions (e.g., telling the truth, keeping promises, not stealing or cheating). **Duration and intensity:** 10 weeks, 6 groups with maximum 10 girls. Group members participated in at least one hour of the three intervention components on weekly basis. **Staff education and training**: curriculum trainer and principal investigator manual-based training by ART master trainer, completion certificate prior to project commencement; project director was licensed mental health counselor, principal investigator was licensed to practice clinical social work. **Treatment fidelity:** monitored by ART master trainer, principal investigator, trainer, and project director; instruction evaluation forms & videotapes, random visits (direct observation); no concerns reported. **Participants**: 30 allocated; 30 evaluated 2 weeks after the intervention
Comparison Number of participants	**Components** Treatment as usual. Varying cognitive-behavioral, insight-oriented, and supportive individual and group therapeutic interventions offered on a daily basis. **Duration and intensity**: no info. **Staff education and training**: three master's-level counselors. **Treatment fidelity**: no info. **Participants**: 30 allocated; 30 evaluated
Outcome results	**Classroom aggression (ACBC):** SMD 0.23 [-0.28, 0.74]; MD 0.25 [-0.30, 0.80] m1=1.56, sd1=1.12, n1=30 ; m2=1.31, sd2=1.04, n2=30 **Classroom rule breaking (ACBC):** SMD 0.24 [-0.27, 0.74]; MD 0.40 [-0.45, 1.25] m1=1.87, sd1=1.89, n1=30 ; m2=1.47, sd2=1.43, n2=30 **Aggression outside classroom (BIR):** SMD -0.14 [-0.65, 0.37]; MD -0.13 [-0.59, 0.33] m1=0.79, sd1=0.93, n1=30 ; m2=0.92, sd2=0.9, n2=30 **Positive behavior outside classroom (BIR):** SMD -0.69 [-1.21, -0.17]; MD -1.90 [-3.28, -0.52] m1=9.9, sd1=3.08, n1=30 ; m2=11.8, sd2=2.31, n2=30
Outcome measures	ACBC: Achenbach Child Behavior Checklist -Teacher report form for ages 6-18. BIR: Behavior Incident Report conducted by program specialist. Outcomes measured two weeks after intervention
Study design	Quasi experimental design. Compromised randomization due to a programmatic requirement that 10 youths compose a group intervention
Reviews and registers	Reviews: Bränström et al, Aggression replacement training (ART) for reducing antisocial behavior in adolescents & adults: A systematic review (not published). Register: The California Evidence-based Clearinghouse, Scientific rating: 3 (1-5 scale), not institution. OJJDP: effective (not institution)

Token Economy (TE) vs. Baseline

Reference Country	Foxx RM. A comprehensive treatment program for inpatient adolescents. Behavioral Interventions 1998;13:67-77. USA
Participants	**Eligible**: adolescents age 12-18 years institutionalized because their behavioral excesses were found intolerable by the community (e.g., extreme aggression and/or highly disruptive behavior) **Non-eligible**: no information **Baseline**: primary diagnoses included personality and character disorders, mild mental retardation, major affective disorders and schizophrenia. Youths attended the facility based school and were involved in both off- and on-unit activities **Setting**: coeducational residential, USA. Average number of clients 44 (range 37-49) **Study period:** before 1998, no more information
Intervention Number of participants	**Components** Interdisciplinary treatment team evaluated strengths and weakness of each client, targeted specific behaviors to be increased and decreased, and developed a list of each client's reinforces preferences. Team monitored client's targeted behaviors monthly. Two types of reinforcement; program points (engagement in target behaviors) and conduct points (avoiding inappropriate behavior, differential reinforcement of other behavior). Client carried token cards. Staff provided social praise, delivered fixed number of points; max 200/day. Points could be used for consumable items (snacks, soft drinks) and recreation/leisure materials (magazines, jukebox, pinball machines) and for bowling, skating, movies, trips to town, staying up late on weekends, and dances. Increased responsibility and appropriate behavior gave increased independence. Clients helped manage living unit and assisted in managing the commissary/lounge. Exclusionary timeout and cost or fining were used to decrease negative behavior (verbal and physical aggression, property destruction, window breaking, and manipulative self-abuse). Exclusionary timeout: 30 min in unlocked closed-door room and 1 min calm exit criterion. If violations 1 min extension. Each occurrence of verbal aggression, loss of 10 points. Neutral deduction, brief explanation. **Duration and intensity:** program phase 6 months and maintenance phase 7 months. **Staff education and training**: author (responsible), 2 master's-level behavior analysts, social worker, several nurses, team leader, assistant, housekeeper, secretary, 13-19 experienced mental health technicians. Staff received didactic training (3 days) and on-the-job training in behavior management techniques (modeling, instructions and feedback). **Treatment fidelity:** weekly supervision and programmatic assistance 8:00-21:30 for (i) continuity and fidelity, (ii) flexibility for immediate decisions, (iii) staff training to handle or avoid crises, (iv) direct-care staff contact with supervisor, and (v) monitoring of compliance or modification. Dual level of supervision. Behavior analysts assumed administrative authority for programs and the team leader retained non-programmatic supervisory responsibility. Team leader accountable for documentation to ensure compliance with facility, state, and federal regulations. **Participants**: 49 allocated (p.69: range 37-49, m=44)
Comparison Number of participants	Pre-treatment phase vs. program phase
Outcome results	**Breaking windows 7 months:** RR 0.57 (0.37, 0.87); RD -0.30 (-0.49, -0.10); N1=44 , N2=44 **Restrained 7 months:** RR 0.67 (0.47, 0.94); RD -0.30 -0.25 (-0.45, -0.05); N1=44 , N2=44 **Receiving PRN 7 months**: RR 0.64 (0.50, 0.82); RD -0.34 (-0.50, -0.18); N1=44 , N2=44
Outcome measures	Numbers of clients breaking windows, number of emergency mechanical restraint usage and number of clients receiving PRN (“when needed”) medication
Study design	Observational pretest posttest design
Notes	Poor documentation
Reviews and registers	Reviews: no. Registers: no

Aggression Replacement Training (ART) vs. Brief instructions & motivational test	
Reference Country	Glick B, Goldstein AP. Aggression replacement training. Journal of Counseling and Development 1987;65:356-362. USA
Participants	**Eligible**: boys, age 14-17 years, who committed crimes (e.g., assault, burglary, auto theft, possession of stolen property, criminal trespass, drug use) **Non-eligible**: no information **Sample**: n=60; median age: 15 (14-17 y); gender: 100% male **Setting**: Annsville Youth Center, a New York State Division for Youth residential facility **Study period**: no information (pre 1987)
Intervention Number of participants	**Components** A multimodal, psychoeducational intervention with three components: Structured learning training: a 50-skill psychoeducational curriculum of prosocial behaviors, systematically taught to small groups. Implemented by modeling, role playing, performance feedback, and transfer training. Youth is taught: beginning social skills, advance social skills, skills dealing with feelings, alternatives to aggression, skills dealing with stress and planning skills. Anger control training: to understanding the inhibition of anger. The youth bring to each session description of recent anger-arousing experience, which they record in a hassle log. Training to respond to their hassles: identifying triggers and cues, using reminders, reducers and self-evaluation. Moral education: set of procedures designed to raise the young person's level of fairness, justice, and concern with the needs and rights of others. **Duration and intensity**: participants met in small groups three times per week for 10 weeks. **Staff education and training:** no info. **Treatment fidelity:** manual and forms, no further information. **Participants**: 24 allocated (2 units); 17 (71%) evaluated
Comparison Number of participants	**Components** 2 units (24 participants) comprised a brief instruction control group, motivational test instructions before post-test to control for effects of trainee motivation. No further information. **Duration and intensity**: no info. **Staff education and training:** no info. **Treatment fidelity**: no info. **Participants**: 36 allocated (3 units); 36 evaluated (7 originally ART transferred to this group by authors)
Outcome results	**Home & family functioning:** SMD 0.64 [0.05, 1.23]; MD 0.66 [0.07, 1.25] m1=1.6, sd1=1.02, n1=17; m2=0.94, sd2=1.02, n2=36 **School functioning:** SMD 0.24 [-0.34, 0.82]; MD 0.27 [-0.37, 0.91] m1=1.15, sd1=1.11, n1=17; m2=0.88, sd2=1.11, n2=36 **Work functioning:** SMD 0.08 [-0.50, 0.65]; MD 0.09 [-0.59, 0.77] m1=1.4, sd1=1.18, n1=17; m2=1.31, sd2=1.18, n2=36 **Peer functioning:** SMD 0.63 [0.04, 1.22]; MD 0.60 [0.06, 1.14] m1=1.67, sd1=0.94, n1=17; m2=1.07, sd2=0.94, n2=36 **Legal functioning:** SMD 0.61 [0.02, 1.20]; MD 0.66 [0.04, 1.28] m1=1.71, sd1=1.07, n1=17; m2=1.05, sd2=1.07, n2=36 **Overall adjustment**: SMD 1.13 [0.51, 1.75]; MD 0.86 [0.43, 1.29] m1=1.88, sd1=0.75, n1=17; m2=1.02, sd2=0.75, n2=36
Outcome measures	Community functioning: Global rating measure the year when youths were released, rated by the youth service team
Study design	Randomized controlled trial (RCT), randomized units (clusters) N=5, each 12 persons. Partially cross-over. Weeks 1-10 ART (n1=24), and control brief instruction plus no intervention (n2=24+12). Weeks 11-20 control group in ART. Totally ART 17 and 43 not ART
Notes	2 studies, 2nd worse results & incomplete information, no intra-class correlation presented. sd from t
Reviews and registers	Reviews: Aggression replacement training (ART) for reducing antisocial behavior in adolescents and Adults: A systematic review. Excluded from Armelius & Andreasson, 2007 for no criminal outcome. Register: The California Evidence-based Clearinghouse, Scientific rating: 3 (1-5 scale), not institution. OJJDP: effective (not institution)

Assertive Continuing Care (ACC) vs. Usual Continuing Care (UCC)	
Reference Country	Godley MD, Godley SH, Dennis ML, Funk RR, Passetti LL. The effect of assertive continuing care on continuing care linkage, adherence and abstinence following residential treatment for adolescents with substance use disorders. Addiction 2006;102:81-93. USA
Participants	**Eligibility**: adolescents in residential treatment who meet criteria for DSM-IV diagnosis of current alcohol and/or drug dependence, 12-18 years **Non-eligible**: youths who left treatment prior to 7th day, ward of the state, danger to self and others, uncontrolled psychotic symptoms **Sample**: n=183; age: 12–14y 10%, 15–16y 45%; 17–18y 45%; gender: 71% male; average stay: 52 days; education 6–8th 37%, 9–12th 63%; full employment 7%, part time 3%, other 90%; two parents 33%, single parent 56%, other family 11%; criminal justice 82%, probation 48%, parole 7%, other 49% **Setting**: continuing care after discharge from residential treatment. Rural Illinois **Study period**: no information (prior to 2006)
Intervention Number of participants	**Components** A case manager (CM) made home visits and assisted in accessing services, prosocial and recreational activities. CM included procedures for: (a) linking the client to necessary services and activities; (b) monitoring lapse cues; (c) advocacy and transportation for the client to access services and job finding; (d) social support for coping with lapse etc. The Adolescent Community Reinforcement Approach (A-CRA) was delivered by CM including a functional analysis of substance using behaviors and social activities, client self-assessment to develop treatment goals. Self-assessment ratings help clients to monitor success in meeting goals and to modify treatment goals or develop new ones. CM also focused skill building on increasing pro-social recreation, communication and problem solving skills and relapse prevention. These procedures incorporated talking about ways to have fun without using substances and making non-substance-using friends. Optional procedures for coping with a lapse, anger management, and job finding. **Duration and intensity:** CM had weekly meetings during 3 months, case load 3-11. A-CRA: no information (in end of treatment: 2 sessions with the caregiver and 2 with both youth and caregiver). **Staff education and training:** CM trained and follow two manuals; case management/home-based- and CRA approaches. **Treatment fidelity:** sessions supervised via audio tape review or observation; data from participants at follow-up on participation in services. 66% of goal sessions per week were completed. **Participants:** 102 allocated; 98 (96%) evaluated at 3 and 9 months
Comparison Number of participants	**Components** Usual continuing care: planned discharges received an appointment 2 weeks after discharge (other discharges received a letter with information). Referral to self-help groups; urine testing and feedback; relapse prevention; social skills training for the client; counseling for parents and youth; and case coordination with schools and probation officers. **Duration and intensity**: UCC was not standardized, 4 agencies had intensive outpatient after care programs 3–5 times/week; 8 agencies outpatient programs 1–2 times/week; no information on case load or duration. **Staff education and training:** no information. **Treatment fidelity:** no information. **Participants**: 81 allocated; 78 (96%) evaluated at 3 and 9 months
Outcome results	**Alcohol abstention 3m**: RR 1.15 [0.83, 1.58]; RD 0.06 [-0.08, 0.21]; n1=49, N1=98 , n2=34, N2=78 **Alcohol abstention 9m:** RR 1.19 [0.74, 1.93]; RD 0.05 [-0.08, 0.18]; n1=30, N1=98 , n2=20, N2=78 **Marijuana abstention 3m**: RR 1.35 [0.96, 1.90]; RD 0.14 [-0.01, 0.28]; n1=51, N1=98 , n2=30, N2=78 **Marijuana abstention 9m**: RR 1.59 [1.02, 2.49]; RD 0.15 [0.01, 0.29]; n1=40, N1=98 , n2=20, N2=78
Outcome measures	Abstention: number of participants who reported abstention from alcohol or marijuana during the first three months and the fourth to ninth months after discharge
Study design	Randomized block (periodically 3:2 and 2:3), gender, criminal justice & social welfare, DSM, EXCEL-random function, assignment by research coordinator (concealed?), non-blinded treatment & data collection by independent research staff
Notes	Binary outcomes recalculated into SMD for meta-analyses (see Borestein et al 2009, p. 45-49)
Reviews and registers	Reviews: James et al., 2013. Register: NREPP abstinence and recovery from substance abuse: 3.6 resp. 3.7 (0-4 scale) 3 studies on ACRA (1 on street living youth, Godley et al 2006 incl). OJJDP: effective (Godley et al, 2006 included)

Assertive Continuing Care (ACC) vs. Usual Continuing Care (UCC)	
Reference Country	Godley MD, Godley SH, Dennis ML, Funk RR, Passetti LL, Petry NM. A randomized trial of assertive continuing care and contingency management for adolescents with substance use disorders. Journal of Consulting and Clinical Psychology 2014;82(1):40-51. USA
Participants	**Eligibility**: adolescents in residential treatment who meet criteria for DSM-IV-TR diagnosis of alcohol and/or drug related disorder in the past year, 12-18 years **Non-eligible:** youths who left treatment prior to 7th day, ward of the state, danger to self and others, significant cognitive impairment, DSM-IV-TR for pathological gambling, discharged to state department of corrections, already in treatment study. **Sample**: n=163; mean age: 15 (12-18 y); gender: 61% male; average stay: 73 days; single-parent family 62%; ever homeless or runaway 43%; high severity victimization 46%; substance dependence 79%; co-occurring psychiatric disorder 79%; violent crime 59%; current criminal justice involvement 83%; prior treatment once 41%, more than twice 27% **Setting**: continuing care after discharge from residential treatment. Rural Illinois **Study period**: 2004-2008
Intervention Number of participants	**Components** An ACC-clinician was assigned to increase engagement in continuing care and other needed services, improve engagement in substance-free activities, and reduce substance use. Clinician helped with linkage to or assistance accessing needed services such as general education development (GED) classes, alternative high school, attendance at probation officer meetings, or medical appointments. Abstinence, healthy social activities, positive peer relationships, and improved family relationships are promoted through a positive, non-confrontational approach Adolescent community reinforcement approach (A-CRA) included procedures for conducting a functional analysis of substance using behaviors and social activities. Adolescent self-rated 16 life health areas (e.g., relationships, money management, school) to develop individualized goals for treatment, monitor success in meeting goals, and develop new goals. Adolescent and clinician focused on skill-building regarding prosocial recreation, relapse prevention, anger management, communication, and problem solving. Discussions about how to have fun without using substances and making non-substance-using friends. Clinicians focused on improving positive interactions and helpful behavior through communication and problem-solving skills training **Duration and intensity:** 10 sessions over 12 weeks (two sessions with the caregiver and 2 with youth and caregiver). **Staff education and training**: ACC-clinician trained by experts and followed two manuals; case management and CRA approaches. **Treatment fidelity**: sessions supervised weekly via audio tape review or observation and using checklist ratings and feedback. Data from participants at follow-up on participation in services (65% more than 4 sessions, 27% 1-3 sessions, 8% no sessions). **Participants**: 79 allocated; 71 (90%) evaluated at 12 months
Comparison Number of participants	**Components** Usual continuing care: not standardized. Program elements included urine testing, social skills training, optional parental counseling, referral to 12-step groups, and case coordination with schools and probation officers. None of these programs provided home visits or parent sessions. **Duration and intensity:** no information on case-load or program duration (follow up after 3 months). **Staff education and training:** community based clinicians employed, trained and supervised at outpatient clinics. **Treatment fidelity:** data from participants at follow-up on participation in services (43% more than 4 sessions, 13% 1-3 sessions, 43% no sessions). **Participants**: 84 allocated; 79 (94%) evaluated at 12 months
Outcome results	**Alcohol abstention 12m**: SMD 0.29 [-0.03, 0.62]; MD 7.10 [-0.53, 14.73] m1=78.3, sd1=22.1, n1=71, m2=71.2, sd2=25.6, n2=79 **Marijuana abstention 12m:** SMD 0.28 [-0.04, 0.60]; MD 8.20 [-1.22, 17.62] m1=66.2, sd1=30.4, n1=71 , m2=58.0, sd2=28.2, n2=79
Outcome measures	Abstention: self-reported percentage of days abstinent from alcohol or marijuana over the 12 months after discharge from residential treatment assessed with the Global Appraisal of Individual Needs (GAIN)
Study design	Randomized block, random number generator, study manager (concealed?), blinded data independent research staff
Notes	Four arms (ACC vs. UCC here)
Reviews and registers	Reviews: no. Register: NREPP abstinent and recovery from substance abuse: 3.6 resp. 3.7 (0-4 scale) 3 studies on ACRA (1 on street living youth, Godley et al 2006 incl). OJJDP: effective (Godley et al, 2006 included)

Assertive Continuing Care (ACC+CM) vs Usual Continuing Care (UCC)	
Reference Country	Godley MD, Godley SH, Dennis ML, Funk RR, Passetti LL, Petry NM. A randomized trial of assertive continuing care and contingency management for adolescents with substance use disorders. Journal of Consulting and Clinical Psychology 2014;82(1):40-51. USA
Participants	**Eligibility**: adolescents, 12-18 years, in residential treatment who meet criteria for DSM-IV-TR diagnosis of alcohol and/or drug related disorder in the past year **Non-eligible**: youths who left treatment prior to 7th day, ward of the state, danger to self and others, significant cognitive impairment, DSM-IV-TR for pathological gambling, discharged to state department of corrections, already in treatment study **Sample**: n=163, mean age: 15 (12-18); gender: 61% male; average stay: 73 days; single-parent family 62%; ever homeless or runaway 43%; high severity victimization 46%; substance dependence 79%; co-occurring psychiatric disorder 79%; violent crime 59%; current criminal justice involvement 83%; prior treatment once 41%, > twice 27% **Setting**: continuing care after discharge from residential treatment. Rural Illinois **Study period**: 2004-2008
Intervention Number of participants	**Components** An ACC-clinician was assigned to increase engagement in continuing care and other needed services, improve engagement in substance-free activities, and reduce substance use. Clinician helped with linkage to or assistance accessing needed services such as general education development (GED) classes, alternative high school, attendance at probation officer meetings, or medical appointments. Abstinence, healthy social activities, positive peer relationships, and improved family relationships are promoted through a positive, non-confrontational approach Adolescent community reinforcement approach (A-CRA) included procedures for conducting a functional analysis of substance using behaviors and social activities. Adolescent self-rated 16 life health areas (e.g., relationships, money management, school) to develop individualized goals for treatment, monitor success in meeting goals, and develop new goals. Adolescent and clinician focused on skill-building regarding prosocial recreation, relapse prevention, anger management, communication, and problem solving. Discussions about how to have fun without using substances and making non-substance-using friends. Clinicians focused on improving positive interactions and helpful behavior through communication and problem-solving skills training. Contingency management (CM): described in CM vs. UC table (same study) **Duration and intensity:** 10 sessions over 12 weeks (two sessions with the caregiver and 2 with youth and caregiver). **Staff education and training:** ACC-clinician trained by experts and followed two manuals; case management and CRA approaches. **Treatment fidelity:** sessions supervised weekly via audio tape review or observation and using checklist ratings and feedback. Data from participants at follow-up on participation in services (65% more than 4 sessions, 27% 1-3 sessions, 8% no sessions). **Participants**: 88 allocated; 82 (93%) evaluated at 12 months
Comparison Number of participants	**Components** Usual continuing care, not standardized. Program elements included urine testing, social skills training, optional parental counseling, referral to 12-step groups, and case coordination with schools and probation officers. None of these programs provided home visits or parent sessions. **Duration and intensity:** no information on case-load or program duration (follow up after 3 months). **Staff education and training:** community based clinicians employed, trained and supervised at outpatient clinics. **Treatment fidelity:** data from participants at follow-up on participation in services (43% more than 4 sessions, 13% 1-3 sessions, 43% no sessions). **Participants**: 84 allocated; 79 (94%) evaluated at 12 months
Outcome results	**Alcohol abstention 12m:** SMD 0.08 [-0.23, 0.39]; MD 2.00 [-5.88, 9.88] m1=73.1, sd1=25.4, n1=82 , m2=71.1, sd2=25.6, n2=79 **Marijuana abstention 12m:** SMD 0.12 [-0.18, 0.43]; MD 3.60 [-5.30, 12.50] m1=61.6, sd1=29.4, n1=82 , m2=58.0, sd2=28.2, n2=79
Outcome measures	Abstention: self-reported percentage of days abstinent from alcohol and marijuana over the 12 months after discharge from residential treatment assessed with the Global Appraisal of Individual Needs (GAIN)
Design	Randomized block, random number generator, study manager (concealed?), blinded data independent research staff
Notes	Four arms (ACC+CM vs. UCC here)
Reviews and registers	Reviews: no; Register on A-CRA: NREPP abstinent and recovery from substance abuse: 3.6 resp. 3.7 (0-4 scale) 3 studies on ACRA (1 on street living youth, Godley et al 2006 incl). OJJDP: effective (Godley et al, 2014 not included)

Contingency management (CM) vs. Usual Continuing Care (UCC)	
Reference Country	Godley MD, Godley SH, Dennis ML, Funk RR, Passetti LL, Petry NM. A randomized trial of assertive continuing care and contingency management for adolescents with substance use disorders. Journal of Consulting and Clinical Psychology 2014;82(1):40-51. USA
Participants	**Eligibility**: adolescents in residential treatment who meet criteria for DSM-IV-TR diagnosis of alcohol and/or drug related disorder in the past year **Non-eligible:** youths who left treatment prior to 7th day, ward of the state, danger to self and others, significant cognitive impairment, DSM-IV-TR for pathological gambling, discharged to state department of corrections, already in treatment study **Sample**: n=163; mean age: 15 (12-18); gender: 61% male; average stay: 73 days; single-parent family 62%; ever homeless or runaway 43%; high severity victimization 46%; substance dependence 79%; co-occurring psychiatric disorder 79%; violent crime 59%; current criminal justice involvement 83%; prior treatment once 41%, > twice 27% **Setting**: continuing care after discharge from residential treatment. Rural Illinois **Study period:** 2004-2008
Intervention Number of participants	**Components** Contingency management (CM): 12 scheduled home visits (or another community location) from study clinician who administered CM procedures for negative alcohol and drug tests and for participating in prosocial activities. Participants provided breath alcohol and urine sample for testing of amphetamine/methamphetamine, marijuana, cocaine, and opiates. Adolescents choose activities for upcoming week and provided verifications for activities completed in prior week. Adolescents earned prize drawings for verified completed activities and negative breath and/or urine samples. They drew slips from bowl containing 510 slips: 29% of slips contained no prize; 64% were worth U.S. $1 (e.g., candy, toiletries); 6.8% worth U.S. $25 (e.g., prepaid cell phone minutes, CD player, gift certificates); 0.2% worth U.S. $100 (e.g., DVD player, video game console). Adolescents earned one draw for each activity completed, maximum two reinforced activities each week. Bonus draws awarded when two activities were completed within a week. If adolescent failed to complete two activities in a week, no bonus draws were earned, and bonus draws were reset to one. Adolescents could earn ≤ 117 draws for completing 24 activities over 12 weeks. Adolescents could also earn ≤ 117 draws for providing negative urine and breath samples. At each meeting, adolescents earned one draw for a negative breathalyzer test and one for a negative urine test. Bonus draws started at one for the first week in which both tests were negative, and then increased one per week in which both tests were negative. Bonus draws were reset to one if the adolescent was not available to provide a sample, refused a sample, or tested positive **Duration and intensity**: one visit per week during 12 weeks. **Staff education and training:** clinicians had similar training and experience as those working in treatment programs, with less than half having graduate degrees. **Treatment fidelity:** sessions supervised weekly via audio tape review or observation and using checklist ratings and feedback; data from participants at follow-up on participation in services (65% more than 4 sessions, 27% 1-3 sessions, 8% no sessions). **Participants**: 84 allocated; 73 (87%) evaluated at 12 months
Comparison Number of participants	**Components** Usual continuing care, not standardized. Program elements included urine testing, social skills training, optional parental counseling, referral to 12-step groups, and case coordination with schools and probation officers. None of these programs provided home visits or parent sessions. **Duration and intensity**: no information on case-load or program duration (follow up after 3 months). **Staff education and training:** community based clinicians employed, trained and supervised at outpatient clinics. **Treatment fidelity:** data from participants at follow-up on participation in services (43% more than 4 sessions, 13% 1-3 sessions, 43% no sessions). **Participants**: 84 allocated; 79 (94%) evaluated at 12 months
Outcome results	**Alcohol abstention 12m:** SMD 0.35 [0.03, 0.67]; MD 8.40 [0.93, 15.87] m1=79.6, sd1=21.3, n1=73 , m2=71.1, sd2=25.6, n2=79 **Marijuana abstention 12m**: SMD 0.39 [0.07, 0.72]; MD 11.00 [2.19, 19.81] m1=69.0, sd1=27.2, n1=73 , m2=58.0, sd2=28.2, n2=79
Outcome measures	Abstention: self-reported percentage of days abstinent from alcohol or marijuana over the 12 months after discharge from residential treatment assessed with the Global Appraisal of Individual Needs (GAIN)
Study design	Randomized block, random number generator, study manager (concealed?), blinded data independent research staff
Notes	Four arms (CM vs. UCC here)
Reviews and registers	Reviews: no. Register: no register in Contingency management

Aggression Replacement Training (ART) and Positive Peer Culture (PPC) vs. The Social Competence Model	
Reference Country	Helmond P, Overbeek G, Brugman D. Program integrity and effectiveness of a cognitive behavioral intervention for incarcerated youth on cognitive distortion, social skills, and moral development. Children and Youth Services Review 2012;34;1720-1728. The Netherlands and Belgium
Participants	**Eligible**: participants in the experimental condition were recruited from twenty-one EQUIP groups (seven female and fourteen male EQUIP groups) from 6 correctional facilities **Non-eligible**: no information **Sample**: n=115 (234 at pretest); mean age: 15.54 (sd 1.56); gender: 68% male. Incarcerated for committing crimes, awaiting sentencing or were placed under supervision order **Setting**: five comparable high-security Dutch juvenile correctional facilities and one Belgian juvenile correctional facility **Study period**: no information
Intervention Number of participants	**Components** EQUIP (Equipping youth to help one another) teach antisocial youth to think & act responsibly by combining PPC & ART. PPC transform negative peer culture into positive culture (individuals feel responsible for helping one another). EQUIP targets specific “limitations” of antisocial youth: cognitive distortions (inaccurate attitudes, thoughts, beliefs in own or other's behavior), social skill deficiencies (unconstructive behavior in difficult interpersonal situations), and moral developmental delays (persistence beyond early childhood of immature moral judgment & pronounced “egocentric bias”). Limitations are addressed in skills-streaming curriculum (ART) more emphasize on cognitive restructuring. Staff & youth use common program language of problem names and thinking errors to identify behavioral problems and distorted thinking. In mutual help meetings youth work on identifying and replacing problem names and thinking errors with the help of their group under guidance of a trainer. In anger management and thinking error correction meetings youth learn to connect (distorted) thinking to anger and learn how to control and reduce their anger. In social skills training meetings youth learn to solve problems in social situations in a step by step approach. In social decision making meetings youth are facilitated in making more mature moral judgments. Average group size: 5 persons (2-8). **Duration and intensity:** 3 mutual help meetings and 2 equipment meetings per week. 10 anger management meetings, 10 social skills training meetings, and 10 social decision making meetings. The equipment curriculum can be completed in 10 weeks. Each meeting lasts 1-1.5 hours. **Staff education and training:** no info. **Treatment fidelity:** measurement instrument to assess four dimensions of program integrity: exposure, adherence, participant responsiveness and quality of delivery (independent observers). Mean level of program integrity 55% (36-76%). **Participants**: 89 evaluated
Comparison Number of participants	**Components** Two correctional facilities in which the Social Competence Model was used. The Social Competence Model is a frequently used method in Dutch juvenile correctional facilities, thus representing usual care in the Netherlands. The social competence model is aimed at reducing problem behavior and increasing competencies of juveniles. **Duration & intensity:** no info. **Staff education & training**: no info. **Treatment fidelity**: no info. **Participants**: 26 evaluated
Outcome results	**Cognitive distortions (HIT) post-test:** SMD 0.02 [-0.42, 0.46], MD 0.02 m1=2.5, sd1=0.89, n1=89; m2=2.48, sd2=0.98, n2=26 **Social skills (IAP-SFO) post-test**: SMD 0.01 [-0.43, 0.45], MD 0.01 [-0.45, 0.47] m1=0.61, sd1=0.88, n1=89; m2=0.60, sd2=1.10, n2=26 **Moral judgement (SRM) post-test:** SMD 0.17 [-0.27, 0.60], MD 0.02 [-0.40, 0.44] m1=2.94, sd1=0.34, n1=89; m2=2.88, sd2=0.41, n2=26 **Moral values evaluation (SRM) post-test:** SMD 0.02 [-0.42, 0.46], MD 0.06 [-0.11, 0.23] m1=2.33, sd1=0.34, n1=89; m2=2.23, sd2=0.58, n2=26
Outcome measures	HIT: the How I Think Questionnaire, low scores= high distortion; IAP-SFO: a shortened recognition measure Inventory of Adolescent Problems - Short Form Objective; Moral value: the Sociomoral Reflection Measure — Short Form Objective
Study design	Quasi-experimental
Notes	If participants left institution before ten weeks, they were asked to fill out the post-test questionnaire at departure when they had participated in the EQUIP program for at least four weeks
Reviews and registers	Reviews: no. Register on ART: OJJDP effective; California Evidence-Based Clearinghouse scientific rating 2. Register on EQUIP: OJJDP evidence rating promising. Helmond, 2012 not included in any.

Aggression Replacement Training (ART) and Positive Peer Culture (PPC) vs. The Social Competence Model	
Reference Country	Helmond P, Overbeek G, Brugman D. An examination of program integrity and recidivism of a cognitive-behavioral program for incarcerated youth in The Netherlands. Psychology, Crime & Law 2015; 21(4):330-346. The Netherlands
Participants	**Eligible**: participants were recruited from 19 EQUIP groups (7 female and 12 male groups) from five correctional facilities **Non-eligible**: no information **Sample**: n=133 (about 380 at pretest); mean age: 15.7 (12-18 y); gender: 74% male. Incarcerated for committing crimes, awaiting sentencing or placed under supervision order. 44% had a criminal law placement. Frequency of previous offenses: 3.8 (4.6) **Setting**: five comparable high-security Dutch juvenile correctional facilities. **Study period:** no information
Intervention Number of participants	**Components** EQUIP (Equipping youth to help one another) teach antisocial youth to think and act responsibly by combining PPC and ART. PPC transform negative peer culture into positive culture (individuals feel responsible for helping one another). EQUIP targets specific "limitations" of antisocial youth: cognitive distortions (inaccurate or rationalizing attitudes, thoughts or beliefs concerning own or other's behavior), social skill deficiencies (imbalanced and unconstructive behavior in difficult interpersonal situations), and moral developmental delays (the persistence beyond early childhood of an immature moral judgment and a pronounced "me-centeredness" or "egocentric bias"). Limitations are addressed in skills-streaming curriculum (ART) with more emphasize on cognitive restructuring. In mutual help meetings youth work on identifying and replacing problem names and thinking errors with the help of their group under guidance of a trainer. In anger management and thinking error correction meetings youth learn to connect distorted thinking to anger and learn how to control and reduce their anger. In social skills training meetings youth learn to solve problems in social situations in a step by step approach. In social decision making meetings youth are facilitated in making more mature moral judgments. Average group size is five participants (2-8). **Duration and intensity:** 3 mutual help meetings and 2 equipment meetings a week. 10 anger management meetings, 10 social skills training meetings, and 10 social decision making meetings. The curriculum can be completed in 10 weeks. Each meeting lasts 1-1.5 hours. **Staff education and training:** no info. **Treatment fidelity**: measurement instrument designed to assess four dimensions: exposure, adherence, participant responsiveness and quality of delivery (independent observers). Mean level of program integrity 54%. **Participants**: 110 evaluated
Comparison Number of participants	**Components** Control group recruited from 2 units that had not implemented EQUIP. The Social Competence Model (SCM) is frequently used in Dutch juvenile correctional facilities (usual care) in the Netherlands. SCM reduce externalizing problem behavior and increase competencies of juveniles. **Duration and intensity:** no info. **Staff education and training**: no info. **Treatment fidelity:** no info. **Participants**: 23 evaluated
Outcome results	**Recidivism (no time point):** RR 2.01 [0.90, 4.49]; RD 0.22 [0.03, 0.41] in favor of usual care n1 = 48, N1 = 110, n2 = 5, N2 = 23 **Recidivism at 6 months:** RR 1.69 [0.42, 6.84]; RD 0.06 [-0.07, 0.19] n1 = 16, N1 = 109, n2 = 2, N2 = 23 **Recidivism at 12 months:** RR 2.33 [0.78, 6.91]; RD 0.18 [0.01, 0.35] in favor of usual care n1 = 33, N1 = 104, n2 = 3, N2 = 22 **Recidivism at 18 months:** RR 1.86 [0.49, 7.00]; RD 0.13 [-0.09, 0.35] n1 = 20, N1 = 70, n2 = 2, N2 = 13
Outcome measures	Recidivism: the Recidivism Coding System (RCS) of Research and Documentation Centre (WODC) of the Ministry of Justice. Prevalence: recidivism or no recidivism after 6, 12, 18 months. Frequency: number of repeated offenses after release.
Study design	Quasi-experimental pre–posttest study
Reviews and registers	Reviews: no. Register on ART: OJJDP effective (Helmond 2015 not included); California Evidence-Based Clearinghouse scientific rating 2 (Helmond 2015 not included). Register on EQUIP: OJJDP evidence rating promising (Helmond, 2015 not included)

Aggregression Replacement Training (ART) + Token Economy (TE) vs. Relational Therapy	
Reference Country	Holmqvist R, Hill T, Lang A. Effects of aggression replacement training in young offender institutions. International Journal of Offender Therapy and Comparative Criminology 2009;53(1):74-92. Sweden
Participants	**Eligible**: young offenders placed in special approved homes, compulsory care, either under the Care of Young Persons Act or the Law About Closed Institutional Youth Care **Non-eligible:** no information **Sample**: n=57; mean age: 17 (16-19 y); male only; all had a penalty, median sentence 3 for theft or assault. Compulsory care. Average length of stay at treatment unit: 436 days **Setting**: Special approved homes in Sweden **Study period**: no information (before 2007)
Intervention Number of participants	**Components** ART is a didactic program with a cognitive-behavioral theory frame. Lessons and role play focusing on aggression control, interpersonal skills training, and socio-moral reasoning. Youth is taught how to think in sequences of physiological sensations, behaviors, and thoughts to detect angry feelings and aiming at controlling anger in a socially competent way. Interpersonal skills taught in group to teach the youth a selection of 50 skills. The youth learns to think and behave in stepwise sequences, skills are learned in separate steps, for example, micro skills, such as making eye contact and adapting level of voice, and macro skills, such as handling group pressure and teasing commentaries. Reasoning based on the idea of levels moral maturity. Through debates and discussions, the youths are trained in thinking about moral dilemmas to obtain a mature socio-moral attitude. Token Economy (TE): a system of behavior modifications based on the systematic reinforcement of target behavior. Personal liberties (e.g., permission to leave, possibility to use computers and music studios) are reduced if youths misbehave with regard to predetermined standards. The youths moved between wards at the institution and changing contact persons, toward increased autonomy. **Duration and intensity**: lessons held twice weekly during 10 weeks. **Staff education and training**: teachers trained in ART and behavioral principles of TE. **Treatment fidelity:** no info. **Participants**: 26 allocated; 25 (96%) evaluated after discharge (50% at 2 year follow up)
Comparison Number of participants	**Components** Relational based treatment program based on object-relational and developmental view. Adult staff served as models for identification by the youth. Youths learn how to establish a trustful relationship with an adult and identify mature values and behavior in the interaction with adults. Each adolescent have a contact person who remained the same during treatment period. **Duration and intensity**: no info. **Staff education and training:** no info. **Treatment fidelity**: no info. **Participants**: 31 allocated; 31 evaluated after discharge (52% at 2 year follow up)
Outcome results	**Recidivism all sentences (PVS):** SMD 0.51 [-0.12, 1.14]; MD 0.50 [-0.24, 1.24] A1 & R1: m1=0.94, sd1=1.12, n1=18; m2=0.24, sd2=1.6, n2=6 A2 & R2: m1=1.28, sd1=1.1, n1=7; m2=0.86, sd2=0.79, n2=25 **Recidivism all suspicions (PVS):** SMD 0.41 [-0.38, 1.21]; MD 0.70 [-0.27, 1.67] A1 & R1: m1=0.58, sd1=1.7, n1=18; m2=0.6, sd2=1.7, n2=6 A2 & R2: m1=1.69, sd1=1.1, n1=7; m2=0.65, sd2=1.3, n2=25
Outcome measures	Penalty value scale (PVS) on basis of the sentence register and police suspicion register. Results include data from period after discharge to 24 month follow up
Study design	Non-randomized trial based on conventional care control including adjustments for baseline difference
Notes	Results based on pooling ES from A1 vs. R1 with A2 vs. R2 (IV & REM)
Reviews and registers	Reviews: excluded from James, Alemi et al., 2013, Aggression replacement training (ART) for reducing antisocial behavior in adolescents and Adults: A systematic review. Register on ART: The California Evidence-based Clearinghouse scientific rating: 3 (1-5), not institution. OJJDP: effective (not institution)

Aggression Replacement Training (ART) and Positive Peer Culture (PPC) vs. Usual Care (UC)	
Reference Country	Leeman LW, Gibbs JC, Fuller D. Evaluation of a multi-component group treatment program for juvenile delinquents. Aggressive Behavior 1993;19:281-292. USA
Participants	**Eligible**: male juvenile delinquents, 15-18 years, with antisocial conduct disorders who were committed for parole violations or for relatively less serious felonies (e.g., breaking and entering, receiving stolen property, and burglary) **Non-eligible**: juveniles committed on a 90-day parole-revocation basis **Sample**: n=57; mean age: 16 (15-18 y); gender: 100% male Predominantly welfare backgrounds, some working class and negligible middle class. Average offense in the moderate range (standards of the state's legal code). A minority of more serious felonies (e.g., armed robbery, felonious assault, or rape). Average stay 6 months. **Setting**: medium-security correctional facility in a Midwestern state. Treatment took place at a living unit at the facility **Study period:** no information
Intervention Number of participants	**Components** EQUIP (Equipping youth to help one another) is a multi-component group treatment program Positive Peer Culture (PPC): in groups with peers replacing antisocial and self-destructive behavior with behavior that helps others. Aggression replacement training (ART): social skills training, anger management training, and moral education is adapted and assimilated into a PPC group format. Equipment meetings: enable group members to become equipped with the resources needed for helping group peers. Modelling, imitation, feedback, and practice procedures are used to develop social skills (e.g. expressing complaint constructively, dealing with someone angry at you, responding to the feelings of others) Anger management inculcates cognitive-behavioral skills (e.g. self-monitoring of emotions and thoughts, thinking ahead, self-evaluation). Moral education component focuses on the remediation of developmental delay. **Duration and intensity**: EQUIP groups met daily during weekdays for 1 to 1 1/2 hours; in addition to regular PPC-style two of the five meetings each week were Equipment meetings. No information on duration. **Staff education and training:** EQUIP staff (youth leaders, social workers, supervisors, and a teacher) trained from interested institutional staff members. **Treatment fidelity:** no info. **Participants**: 20 allocated; 18 (90%) evaluated at 6 and 12 months
Comparison Number of participants	**Components** Subjects assigned to various units at the institution. The facility did not have a standard institution-wide treatment program; the social workers of the respective units varied in treatment approaches. **Duration and intensity:** no info. **Staff education and training**: no info. **Treatment fidelity**: no info. **Participants**: 37 allocated (19 received a five-minute motivational induction); 36 (97%) evaluated at 6 and 12 months
Outcome results	**Recidivism 6 months**: RR 0.50 [0.16, 1.60]; RD -0.15 [-0.36, 0.07] n1 = 3, N1 = 20, n2 = 11, N2 = 37 **Recidivism 12 months:** RR 0.37 [0.12, 1.13]; RD -0.26 [-0.48, -0.03] n1 = 3, N1 = 20, n2 = 15, N2 = 37
Outcome measures	Recidivism: Parole revocation and/or institutional recommitment collected from the states juvenile corrections research office
Study design	Random assignment, no further information
Notes	A preliminary version of the EQUIP program
Reviews and registers	Reviews: Armelius & Andreasson, 2007, James et al (2011). Register on ART: OJJDP effective (Leeman 1993 not included); California Evidence-Based Clearinghouse: scientific rating 2 (Leeman 1993 not included). Register on EQUIP: OJJDP promising (Leeman, 1993 included)

The Trauma Intervention Program for Adjudicated and At-Risk Youth (SITCAP-ART) vs Waitlist	
Reference Country	Raider MC, Steele W, Delillo-Storey M, Jacobs J, Kuban C. Structured sensory therapy (SITCAP-ART) for traumatized adjudicated adolescents in residential treatment. Residential Treatment for Children and Youth 2008;25(2):167-185. USA
Participants	**Eligible**: traumatized adjudicated adolescents with documented multiple trauma exposure in residential care **Non-eligible**: no information **Sample**: n=23; mean age: 17 (15-18 y); gender: 55% male Behavior problems at home, criminal behavior, alcohol/substance abuse, behavior problems at school, and attachment problems; trauma exposure e.g., psychological maltreatment, physical maltreatment, sexual maltreatment, domestic violence, neglect, traumatic loss, or separation. Multiple trauma 33%, grief 55% **Setting**: Multi-county juvenile attention center (residential treatment), Ohio in collaboration with Northeast Ohio Behavioral Health, North Canton and Cuyahoga Falls, Ohio, USA **Study period:** pre 2007, no more information
Intervention Number of participants	**Components** Comprehensive treatment approach with cognitive behavioral components and sensory based therapeutic activities to process implicit trauma memories. Aim to diminish terror and facilitate feelings of safety. Trauma reactions are normalized and distinction between trauma and grief is emphasized. Structured protocol: session-by-session, situation and age-specific guide to intervention. Focus on themes (hurt and worry related to trauma) enhances generalizability of model. Parent component: supportive caretaker response, traumas in parent's life. Program integrates cognitive strategies with sensory and implicit strategies to achieve the successful cognitive reordering of traumatic experiences moving from victim to survivor thinking, and allow them to become more resilient to future traumas. Addressing maladaptive coping behaviors characteristic of adolescents who experienced long-term trauma reactions. **Duration and intensity**: 10–11 sessions (75 minutes each) during 10 weeks (7 group sessions with 6 participants). Session 1: structuring the process, create safety and inform about the role of trauma. Session 2: individual trauma debriefing. Session 3-8: experiences, sensations and themes of trauma: drawing, details, trauma-specific questions, cognitive reframing, and primary caregiver involvement. **Staff education and training:** the therapist was staff member of Northeast Ohio Behavioral Health Center, trained in SITCAP-ART and certified by the Trauma and Loss Institute (developer of the treatment model). **Treatment fidelity:** Fidelity of Treatment Checklist (FTC): 98.5% fidelity with the manualized treatment model. **Participants**: 13 allocated; 10 (77%) evaluated at end of treatment
Comparison Number of participants	**Components** Usual care after discharge, waitlist 10 weeks, then SITCAP-ART. **Participants**: 10 allocated; 9 (90%) evaluated
Outcome results	**Anxious/depressed change (YSR):** SMD 1.53 [0.51, 2.56]; extrapolated m:s, and sd:s **Withdrawn/depressed change (YSR):** SMD 0.14 [-0.74, 1.02]; extrapolated m:s, and sd:s **Somatic complaints change (YSR):** SMD 0.29 [-0.59, 1.17]; extrapolated m:s, and sd:s **Social problems change (YSR):** SMD 1.15 [0.19, 2.11]; extrapolated m:s, and sd:s **Thought problems change (YSR):** SMD 1.20 [0.23, 2.17]; extrapolated m:s, and sd:s **Attention problems change (YSR):** SMD 0.35 [-0.53, 1.24]; extrapolated m:s, and sd:s **Rule breaking behavior change (YSR):** SMD 1.12 [0.16, 2.08]; extrapolated m:s, and sd:s **Aggressive behavior change (YSR):** SMD 1.17 [0.20, 2.13]; extrapolated m:s, and sd:s **Internalizing behavior change (YSR):** SMD 1.45 [0.44, 2.46]; extrapolated m:s, and sd:s **Externalizing behavior change (YSR):** SMD 0.99 [0.05, 1.93]; extrapolated m:s, and sd:s **Total problems change (YSR):** SMD 1.42 [0.42, 2.43]; extrapolated m:s, and sd:s
Outcome measures	YSR: The Youth Self Report, assessing problem behaviors, ages 11-18 years. Outcomes measured after intervention
Study design	Randomized crossover waitlist, no information on randomization and allocation procedure, blinded data?
Notes	Strange cross-over design and statistics. Author contacted, strange response. Several risky calculations necessary
Reviews and registers	Reviews: no. Register: NREPP quality of outcomes 2.3-2.05 (0-4 scale) Raider et al 2008 included; The California Evidence-based Clearinghouse, scientific rating: 3 (1-5 scale) Raider et al 2008 included

Dialectical Behavior Therapy – Corrections Modified (DBT-CM) vs. Usual Care (CU)	
Reference Country	Shelton D, Kesten K, Zhang W, Trestman R. Impact of dialectic behavior therapy-corrections modified (DBT-CM) upon behaviorally challenged incarcerated male adolescents. Journal of Child and Adolescent Psychiatric Nursing 2011;24:105-113. USA
Participants	**Eligible**: male adolescents committed to state department correction, impulsive behavior problems, perceived by corrections staff to be unpredictable, difficult to manage **Non-eligible**: presence of unstable medical or neurological disorder that would interfere with participation in the protocol or cause additional risk. Non-English speaking; < 1 year from end of sentence; not understand the study as described on the consent form; screening positive for psychopathy (evidenced by a score > 30 on the Hare Psychopathy Checklist-Screening) **Sample**: n=38; mean age: 18 (16-19 y); male only. Average education level m=10.4 (8-12 y); 85% not married, 15% cohabitating; average relatives living in their homes 3.2; average friends 0,23; unemployed 61%; employed part-time 31%; remaining worked 8%; 88% religious connection; 60% charged with violent crimes (e.g., physical or sexual assault, manslaughter); 40% charged with nonviolent offenses (e.g., drug possession, larceny) **Setting**: correctional facility, Connecticut, USA **Study period**: 2004-2006
Intervention Number of participants	**Components** The DBT treatment manual and the clinical materials were adapted to be appropriate for forensic settings. Vocabulary adapted to be easily understood and pictures added. Workbooks thermal bound (no metal) preventing participants from injure themselves or others. Use of certain objects such as pencils had to be acceptable according to facility's safety and security protocol. The skills training group includes four core modules to increase adaptive behaviors/cognitive abilities and decreasing maladaptive behaviors: (1) mindfulness (giving attention to the present moment and targets self-dysregulation and identity confusion by emphasizing self-awareness); (2) interpersonal effectiveness module (assertiveness, interpersonal skills, conflict resolution); (3) distress tolerance (strategies to tolerate distress, without making it worse, by engaging in old impulsive and self-destructive behaviors and by teaching distraction and self-soothing techniques); (4) emotion regulation (identifying and describing emotions, accepting trauma experiences, and focusing on being less reactive to them, increase positive emotions). Examples relevant to participants' daily experiences in their correctional facility are used in teaching each skill. DBT-CM skills are projected with plans for release to anticipate applications of the skills in their outside lives. Teaching was modified, with examples and subtle adjustments to correspond to the correctional setting. **Duration and intensity:** highly structured DBT-CM groups for 16 weeks, co-led by 2 research clinicians. **Staff education and training:** no info. **Treatment fidelity**: manual, no further information. **Participants**: 38 allocated; 26 (68%) evaluated after intervention
Comparison Number of participants	Pretest (not DBT-CM)
Outcome results	**Physical Aggression BPAQ:** SMD 1.35 (0.71; 2.00); MD 1.75 (1.02; 2.49) swap needed **Disciplinary tickets reduce:** SMD 0.70 (0.14; 1.26); MD 0.74 (0.17; 1.30) swap needed **Overt Aggression Scale Modified OAS-M:** no data **Brief Psychiatric Rating Scale:** no data **Ways of coping checklist**: no data **Positive and Negative Affect Scales:** no data
Outcome measures	BPAQ: The Buss-Perry Aggression Questionnaire (physical-, verbal aggression, anger, hostility), measured post-intervention. Disciplinary tickets given to participants when conducting behavioral offences12 months prior and 6 months after treatment
Study design	Non-randomized trial based on pre-test & post-test design
Notes	Subsample of larger study. N=23, not 26 due to df in authors BPAQ results
Reviews and registers	Review: no. Register: NREPP Borderline and Eating disorder quality of outcomes: 3.2-3.7 (0-4)

Family Integrated Transitions (FIT) vs. Usual Care (UC)	
Reference Country	Trupin EJ, Kerns SEU, Cusworth Walker S, DeRobertis MT, Stewart DG. Family integrated transitions: A promising program for juvenile offenders with co-occurring disorders. Journal of Child & Adolescent Substance Abuse 2011;20:421-436. USA
Participants	**Eligibility**: juvenile offenders age 11-17 with co-occurring substance use, mental health disorders, assigned to be on parole ≥ 4 months post-release from the secure facility. Met criteria for a DSM-IV Axis 1 diagnosis, or prescribed psychotropic medication and/or demonstrated suicidal behavior within past 3 months. Conduct or oppositional defiant disorder in combination with additional unrelated diagnoses **Non-eligible**: conduct or oppositional defiant disorder as only psychiatric diagnosis, primary diagnosis of paraphilia or pedophilia **Sample**: n=274; mean age at release: 16.35 (11-17 y); gender: 83% male; Initial Security Classification Assessment (ISCA) score m=43.78; Criminal history 16.02; Prior person offense m=0.99; Prior property offense m=1.49. **Setting**: Washington State Juvenile Rehabilitation Administration (JRA) **Study period:** 2001-2005
Intervention Number of participants	**Components** Manualized family and community based treatment specifically addressing risk & protective factors of adjudicated adolescents diagnosed with co-occurring mental health and substance use disorders. Multi-systemic Therapy (MST) (foundation of FIT), manualized, flexibly delivered program addressing multiple determinants of serious antisocial behavior in juveniles with a social-ecological framework. Tailored treatment goals for risk and protective factors within environment (family, school, community). Dialectical behavior therapy (DBT): skills training to target emotional dysregulation (anger, impulse control), to replace maladaptive emotional & behavioral responses with effective, skillful responses. Motivational enhancement (ME) promotes adherence to treatment and enhance relapse prevention efforts. Engaging the family in a supportive and non-confrontational manner. The parenting skills training is based on a behavioral orientation. Major themes: reasonable expectations, monitoring, facilitating relationship-enhancing practices, developing effective, positive disciplinary skills. **Duration and intensity**: 2-3 months in custody and 4-6 months post release; families received service (about 2 h/week) in homes and communities; always access to FIT coach; case load 4-6 families per coach, extensive team supervision. **Staff education and training:** coaches (master's-level clinicians) supported by a supervisor, a PhD consultant and a psychiatrist). **Treatment fidelity**: Therapist Adherence Measures (TAM) data from 2002 (n=43), average score met established MST fidelity-level (>0.40; m=0.41, sd=0.52); no validated measures of fidelity for other intervention components. **Participants**: 105 allocated; 105 evaluated at 6, 12 and 18 months
Comparison Number of participants	**Components** All youths were required to participate in JRA-provided parole service. The service varied and could include substance abuse treatment, functional family parole, and various intensities of supervision. **Duration and intensity**: 4-6 months after release. **Staff education and training**: no info. **Treatment fidelity**: no info. **Participants**: 169 allocated; 169 evaluated at 6, 12 and 18 months
Outcome results	**Recidivism within 6 months**: RR 0.75 [0.42, 1.35]; RD -0.04 [-0.13, 0.04] n1 = 14, N1 = 105, n2 = 30, N2 = 169 **Recidivism within 12 months**: RR 0.74 [0.50, 1.08]; RD -0.09 [-0.20, 0.02] n1 = 27, N1 = 105, n2= 59, N2 = 169 **Recidivism within 18 months:** RR 0.76 [0.55, 1.05]; RD -0.10 [-0.22, 0.01] n1 = 35, N1 = 105, n2 = 74, N2 = 169
Outcome measures	Recidivism: re-convictions (total misdemeanor, felony convictions, and violent felony conviction) measured through administrative databases
Study design	Administrative data (non-randomized)
Notes	Graphically extracted data for binary effects. Problem: 36 months according to article, but 600 days ≈ 20 months (p.430, Figure 1). HR 0.70 & 0.91 ns (felony & overall recidivism). Adjusted results in Washington state report (one in favor of FIT)
Reviews and registers	Reviews: no. Register MST–FIT: NREPP recidivism 3 (0-4) (Trupin 2011 included). OJJDP: promising (Trupin, 2011 included)

Dialectical Behavior Therapy Program (DBT) vs. Usual Care (UC)	
Reference Country	Trupin EW, Stewart DG, Beach B, Boesky L. Effectiveness of a dialectical behavior therapy program for incarcerated female juvenile offenders. Child and Adolescent Mental Health 2002;7(3):121-127. USA
Participants	**Eligible**: adolescent females incarcerated at a Juvenile Rehabilitation facility **Non-eligible**: no information **Sample**: n=90 (Mental Health Cottage (MHC) with DBT n=22; General Population Cottage (GPCD) with DBT n=23; General Population Comparison Cottage (GPCC) with usual care n=15; 30 female offenders in the comparison group); mean age: 15; gender: 100% female. Average prior offences: MHC 6; GPCD 5; comparison 7. Axis I Diagnosis: MHC 78%; GPCD 75%; comparison 50%. **Setting**: State of Washington Juvenile Rehabilitation Administration facility **Study period:** before 2002, no more information
Intervention Number of participants	**Components** Wide assortment of cognitive behavioral strategies combined with philosophical emphasis on dialectics. Aims to find the synthesis between opposite positions; this translates into accepting patients “where they are” while benevolently demanding change. Therapists balance strategies of support and acceptance with confrontation and change. Focus on validation of patients’ current emotional, cognitive and behavioral responses as understandable in the context of the patient’s skill level. Skills are encouraged and coached in all aspects, in an effort to reframe problem behaviors as simply “ineffective” in comparison to a more effective use of skills. Therapist is both coach and consultant to patient, supporting a positive interpersonal and collaborative relationship. Behavioral targets were adapted to reflect mental health needs of female juvenile offenders, focusing on offense related behaviors. Target behaviors: (1) life-threatening behaviors (e.g., suicidality); (2) unit-destructive behaviors (e.g., violence); (3) treatment-interfering behaviors (e.g., non-compliance); (4) quality of life-interfering behaviors (e.g., high-risk sexual behavior). Locked facilities offering educational, vocational and recreational programs in addition to group meetings to discuss issues of daily living and cottage rules. **Duration and intensity:** 2 staff and up to 8 residents in each group. Group met 1-2 times per week (60-90 minutes). Homework assignments on weekly basis, daily Diary Card (frequency at which each skill was attempted). Residents reinforced for participation in-group and practicing the skills. **Staff education and training:** 4 staff from MHC, along with two research staff, received extensive training (80 hours) in DBT. Staff from GPCD and remaining staff from MHC received 16 hours of introductory training in DBT in addition to 1-2 hours of on-site instruction and case consultation weekly throughout the year. After 40 hours training MHC staff began adapting DBT to adolescents. **Treatment fidelity:** staff received reinforcement for learning DBT, co-facilitate skills groups. Through ongoing training and consultation with staff, efforts were made to continuously expand the application of DBT-based interventions and competencies within the cottages. **Participants**: 55 allocated (MHC 22, GPCD 23); no information about number evaluated
Comparison Number of participants	**Components** Behavioral modification program rewarding compliance with rules and punishing rule infractions (same as intervention group). Locked facilities offering educational, vocational and recreational programs in addition to group meetings to discuss issues of daily living and cottage rules (same as intervention group). **Duration and intensity:** no info. **Staff education and training:** no info. **Treatment fidelity:** no info. **Participants**: 45 allocated (GPCC 15 Additional offenders 30); no information about number evaluated
Outcome results	**Reduction of problem behavior during stay:** SMD 0,22 (-0,17; 0,60); MD 0,03 (-0,02; 0,08)
Outcome measures	Reduction of problem behaviors: aggression, suicidal acts and classroom disruption
Study design	Non-randomized trial based on pre-test & post-test design
Notes	Data from R^2, and p
Reviews and registers	Review: no. Register: NREPP Borderline and Eating disorder quality of outcomes: 3.2-3.7 (0-4)