

# A Systematic Review of the Literature on the Use of Rational Emotive Behaviour Therapy in Criminal Justice Work to Reduce Re-offending

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**Abstract** A systematic review of the published literature from 1995 to 2007 considers the published evidence on the use of interventions employing Rational Emotive Behaviour Therapy in criminal justice efforts to reduce re-offending. Thirty-six studies are briefly described, summarised and appraised for research quality using a six point scale. Twenty-four studies were excluded from further analysis due to insufficiently rigorous or weak research design and method. Twelve studies were appraised as sufficiently robust to reliably inform the research interest. Further analysis of the studies indicated an association between negative emotional states and offending behaviour, some evidence of REBT effectiveness in treating emotional disturbance in offender populations, and mixed evidence of REBT effectiveness in reducing re-offending. It is concluded that interventions using REBT might be a promising approach for aiding criminal justice aims to reduce re-offending.

**Keywords** Systematic review · Criminal justice · Re-offending · REBT

## Introduction

One of the key public service agreements of the National Offender Management Service in the Ministry of Justice, England and Wales, is to reduce further offending

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of offenders processed by the criminal justice system (Home Office 2002). To this end, the service has taken different approaches to reducing and preventing crime, including the use of interventions designed to rehabilitate and resettle offenders dealt with in custody by HM Prison Service and supervised in the community by the National Probation Service. Amongst the rehabilitative interventions used, those based on the theory and practice of cognitive behaviour therapy (CBT) are heralded as the most effective for producing an outcome of reduced re-offending (Vennard et al. 1997).

A relatively recent Home Office publication summarised current knowledge of what works to reduce re-offending and concluded that the few rehabilitative programmes in use nationally, that had been subject to evaluation, produced mixed evidence of effectiveness in England and Wales (Debidin and Lovbakke 2005). The question of ‘what works with whom, to reduce re-offending?’ remains open to exploration for as long as existing answers indicate that there is still much to be tried, tested and known. There is value in examining different approaches to determine what contribution they might make, if any, towards achieving criminal justice aims to reduce re-offending. In the case of programmes based on cognitive behavioural approaches, it might prove useful to know if Rational Emotive Behaviour Therapy (REBT), which uses both cognitive and behavioural methods, produces a desired effect. Such knowledge might be of value in determining the training and practice of those charged with managing and rehabilitating offenders within the National Offender Management Service. It might also be of value in determining how best to manage the problems of emotional well being and thinking problems found as prevalent criminogenic needs with a large proportion of offenders in England and Wales.<sup>1</sup> Profiles of offenders in both custodial and community settings show that 58% of those assessed had a problem of emotional well-being, while 61% had problems with thinking (Howard 2006).

The purpose of the research reported here was to summarise the published literature on interventions employing Rational Emotive Behaviour Therapy in criminal justice efforts to reduce re-offending, by applying the method of a systematic review of the literature to determine the current state of knowledge.

In deciding how far back to review the literature on this subject, a useful starting point was suggested by the existence of a special mini-series edition of the *Journal of Rational-Emotive & Cognitive-Behaviour Therapy* published in 1995 which focused on psychotherapeutic practice of Rational Emotive Behaviour Therapy (REBT) and Cognitive Behaviour Therapy (CBT) with offender populations. The contents of that journal are summarised briefly here as a further introduction to the research described in this report.

The editor introduced the mini-series with the suggestion that offenders benefited from REBT in two stages: Firstly, from learning the ABC model which shows the mediating role of beliefs in response to activating events, to determine emotional, behavioural and cognitive consequences. Secondly, through challenging irrational thinking and adopting “more rational appraisals of reality” (Bernard 1995, p. 212).

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<sup>1</sup> Criminogenic needs are problems, usually of a changeable nature, that are associated with offending and implicated as possible causes and targets of treatment (Andrews and Bonta 1998).

One of the contributors to the mini-series, who had raised the question of how well REBT explained the anti-social behaviour of the offender population as well as it did emotional disturbance, was invited to outline thoughts on the connection between irrational beliefs and disordered behaviour.

In the first article, entitled *Power and Control in the Male Antisocial Personality*, Nauth (1995) hypothesised a connection between antisocial behaviour and the irrational belief “*I must have control*”, and used this to explain both aggressive behaviour and opposition to authority as resulting in efforts to maintain control. The author also claimed that REBT was ideally suited to therapeutic work with offenders in teaching them the role of beliefs in generating emotional distress and poorly adjusted behaviour, and thereby encouraging them to accept responsibility for and exercise control over their own thoughts, feelings and behaviours.

While Nauth used examples from specific cases to illustrate her suppositions and also referred to two empirical studies that indicated some support of her hypothesis, the causal relationship between irrational beliefs and offending behaviour was not clearly evidenced nor had the supposed treatment effect of REBT been rigorously tested. At best, the author pointed to the need for empirical study to examine the hypothesised connection between an irrational demand for control and offending behaviour.

The second article in the mini-series addressed *The Practice of Rational Emotive and Cognitive Behaviour Therapy with Offenders* (Altrows 2005) and began by noting Ellis’ recommendations on working with the criminal personality. These were to: “change the basic thinking of the offender in the direction of diminishing absolutistic thinking, increasing long range hedonism and increasing self-acceptance” (Ellis 1985, cited in Altrows 1995 p. 225).

Altrows also noted at the time that there was an increasing body of empirical literature on REBT and CBT with offenders and that much of it provided evidence for the notion that cognitions, including irrational beliefs, play an important part in mediating criminal activity. This idea was further supported by other evidence explaining models of aggression.

In his article, Altrows (1995) also suggested that cognitive therapies might decrease unpleasant emotions such as guilt or anxiety and thereby undermine motivation to offend or decrease the risk of re-offending. Reference to one study lent some support to Altrows claims for the significance of negative emotional states amongst offenders.

The third article in the series dealt with the practical issues of REBT in a forensic setting, and provided a mainly descriptive account of the prison environment based on the author’s experience. Kopec (1995) claimed that REBT was an effective therapy to use with the offender population because of its active directive style, and because it dealt with practical problems in the present and provided solutions. She claimed that REBT provided offenders with a new mechanism of coping that they could incorporate into other areas of their lives. Much of what she described was anecdotally based on her own experience, including the finding that pragmatic disputation worked more effectively than other types of disputation with an inmate population. Her conclusions that REBT was an effective treatment to use in a

forensic setting, for enabling inmates to overcome the hassles, stresses and frustrations of life were not supported with reference to any empirical evidence.

The fourth article in the series, *Rational Cognitive Therapy with Public Offenders*, briefly presented an illustrative case of a variation of REBT, described as a simplified version for the offender population. This method aimed to “provide offenders with a method for understanding and alleviating unhelpful emotional reactions” (Smith and Lombardo 1995 p. 256). The authors reasoned that, based on a reported finding (for which details were not provided) of the problems that faced 9 out of 10 offenders, that teaching offenders how to relate better to people and how to manage their money and leisure time more effectively, seemed logical steps to helping offenders to adjust. Smith and Lombardo did not explain how their varied version of REBT would achieve this end or any evidence that their assumption of a need for a simplified version was justified. Moreover, they provided only anecdotal evidence of the effectiveness of their approach with ‘public offenders’.

The fifth article in the series described the *Identification of Adolescent Sexual Offenders: A REBT Model* (Seasock 1995). The author emphasised the importance of assessing perceptions, inferences and beliefs in distinguishing between the adolescent sexual offender and the adolescent who commits inappropriate sexual behaviour. He reported that low frustration tolerance and demandingness appeared to be the most commonly found irrational beliefs amongst adolescent sexual offenders in his programme.

Based on his experience, and illustrated with one example, the author claimed that the presence or absence of dysfunctional cognitive processes, was best established by using the theoretical concepts of REBT. He claimed that practitioners proficient in the use of REBT in this way, would “develop more appropriate client-centred treatment strategies that in turn would show greater success rates in the therapeutic process” (Seasock 1995 p. 267). He also claimed that, based on his personal experience, the use of REBT “greatly decreases if not eliminates the possibility of recidivism” (p. 272). However, no empirically derived evidence of any of his claims was reported.

The sixth and final article in the series considered the *Uses of Rational Emotive Behaviour Therapy with Juvenile Sex Offenders* (Whitford and Parr 1995). The authors described their use of REBT since 1985 as a “core treatment tool” in their work with sex offenders and noted that its effectiveness was “demonstrated in the reduction of emotional disturbance and/or negative mood states that are often the precursor to the deviant cycle of sexual abuse”. They described the prevalence of low frustration tolerance and poor impulse control amongst many of their juvenile sex offenders.

After describing the therapeutic approach, they reported that the practice of REBT methods led to maladaptive behaviour, emotions and beliefs being dramatically reduced, while self-efficacy increased. They also claimed that in their experience, REBT group treatment reduced juveniles’ sex offending and thereby, reduced sexual abuse in the community (Whitford and Parr 1995). They expressed concern that programme effectiveness would be impaired if offenders who developed an REBT outlook were then placed amongst rehabilitative caregivers with irrational and emotionally disturbed ways. There is some irony in the fact that

the authors offered no empirically derived evidence to support their claims, and concluded with the observation that “research and outcome studies on the assessment and treatment of juvenile sex offenders leave much to be desired. There is much work to be done and reported by competent clinicians” (Whitford and Parr 1995 p. 282).

The conclusions to be drawn from the mini-series special edition of the journal on the application of REBT with offenders did not provide any rigorously obtained evidence of its effectiveness in changing re-offending or any other outcomes. At best, it highlighted several theories about the use of REBT with offenders that had not yet then been empirically tested. The question of what REBT might contribute to criminal justice efforts to reduce re-offending had not even begun to be sufficiently addressed in the special edition of the journal.

A brief review of the few articles cited in the journal of empirical research on REBT with offenders conducted prior to 1995 indicated that these earlier studies also lacked rigour in being similarly based on anecdote (e.g. Nauth and Edwards 1988), using very small sample sizes and weak evaluation design (e.g. Solomon and Ray 1984). However, reference was made to much more rigorous pieces of research, including for example longitudinal studies (Marques et al. 1994), studies employing experimental design (Jenkins-Hall 1994), and the seminal work of Yochelson and Samenow (1977) on *The Criminal Personality* which concluded that the approach to eliminating criminal thinking processes was related to reality therapy and rational-emotive therapy.

The current research considers that the question might be best answered with reference to:

- (a) robust evidence of the need for an intervention that deals with emotional disturbance or irrational beliefs in offender populations.
- (b) robust evidence of the effectiveness of interventions using REBT, in changing offending behaviour.

This evidence was sought using the method of systematic review of the literature instead of through evaluative research using experimental design.

## Method

The method of systematic review departs from narrative reviews by systematically categorising the standard of previous research according to the methods used, without reliance on unstructured description or reporting of statistical findings (Davies and Crombie 2001). The present study was a qualitative rather than a quantitative (or meta-analytic study), and effect sizes were not considered.

### Search Process and Restrictions

This literature review was limited to published literature listed in library databases, and the search was restricted to literature containing search terms relevant to the research interest.

The first search used the terms: *Rational Emotive Therapy (RET)*, *Rational Emotive Behaviour<sup>2</sup> Therapy (REBT)*, *Cognitive Behavioral Therapy (CBT)* AND: *Offenders, Offending, Crime, Criminals, Rehabilitation, Re-offending, Prisoners, Prisons, Probation Probationers, Corrections, Correctional Services, Forensic, Desistance, Deterrence, Dangerous.*

The second search used the terms: *emotions, feelings, emotional states*, AND *Offenders, Offending, Crime, Criminals, Re-offending, Desistance.*

The search parameters were set from 1995 to 2007 using English language journals only. The search was done using two databases. The first was Psychlit/ PsycInfo, which is a database and search engine of psychological literature from the 1800s to the present, with coverage of over 1,900 journals and publications in psychology, psychiatry, neuropsychology and neuroscience. It includes, for example, the *Journal of Cognitive and Behavioural Psychotherapies*, the *Journal of Rational-Emotive & Cognitive Behaviour Therapy*, *Journal of Quantitative Criminology*, *Journal of Social and Clinical Psychology*.

The second database used was the National Criminal Justice Reference Service (NCJRS) which has a large criminal and juvenile justice library covering publications from the 1970s to the present and containing over 185,000 publications, reports and articles from around the world. It covers, for example, *Crime and Delinquency*, *Criminal Justice and Behaviour*, *Criminology*, *Journal of Behaviour Therapy and Experimental Psychiatry*, *Journal of Addictions and Offender Counseling*.

Abstracts were obtained for all results produced from the initial searches and these were read to check relevance to the research question. All abstracts that appeared relevant to offenders and therapeutic treatment using REBT were retained and the full text article was obtained where the subject was clearly research as opposed to an instruction manual or practitioner's guide. All studies retained for analysis involved some use of REBT.<sup>3</sup> As the main focus of interest was on the outcome of re-offending, studies were excluded which referred only to outcomes of substance misuse or abuse, even where the intervention involved CBT methods relevant or similar to methods used in REBT.<sup>4</sup> Other excluded studies included those focused solely on describing the process of therapy with no claims made about outcomes, and studies about offending without reference to therapeutic interventions.

The retrieved research articles were read and summarised in a Table 1 noting the year and authors of the study, the study type or research design used, details of sampling, findings and conclusions, a descriptive appraisal of the research quality and a numerical rating of the research quality. The appraisal rating is described below. The table of findings is included in the results section of this report.

<sup>2</sup> Both the American and British spellings of behavior and behaviour were used.

<sup>3</sup> This includes studies of interventions that do not appear to use REBT, but are known to by the first author who was trained in the use of them.

<sup>4</sup> In effect, several studies referred to the treatment of drug-related problems based on principles of cognitive behavioural theory but no studies referred specifically to REBT or related CBT methods.

**Table 1** Summary of research published from 1995 to 2006, relevant to REBT and criminal justice aims to reduce re-offending

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Nauth (1995)	Exploratory/ theoretical/case studies/ anecdotal	Selected examples from cases	The demand "I must have control" explains antisocial behaviour. REBT is ideally suited to work with offenders to teach them control over their thoughts, feelings and behaviours. Corroborative research needed	Theoretical propositions are not rigorously tested. Validity, reliability and limitations of data presented from case studies are not discussed. Conclusions are unsubstantiated	0
Altrows (1995)	Exploratory/ descriptive/ anecdotal	Selected examples from cases	Cognitive therapies might decrease unpleasant emotions such as guilt or anxiety and thereby undermine motivation to offend and decrease risk of further offending	Theoretical propositions are not rigorously tested. Validity, reliability and limitations of data presented from case studies are not discussed. Conclusions are unsubstantiated	0
Kopec (1995)	Anecdotal	None	REBT in an effective treatment in a forensic setting because it is active and directive and provides solutions. It enables the inmate to overcome hassles and stresses. Pragmatic disputation is more effective than other types of disputation with this population	Theoretical propositions are not rigorously tested. Validity, reliability and limitations of descriptions based on inmates from one Canadian prison, were not discussed. Conclusions are unsubstantiated	0
Smith and Lombardo (1995)	Anecdotal	One	Teaching offenders how to relate better to people and how to manage their money and leisure time more effectively are logical steps to helping them adjust	Assumptions are not tested. Conclusions are unsubstantiated	0

**Table 1** continued

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Seasock (1995)	Descriptive, anecdotal	Selected examples from cases	The theoretical concepts of REBT afford the best way of establishing whether or not a dysfunctional cognitive process is present for an adolescent. Low frustration tolerance and demandingness appear to be the most common irrational beliefs of adolescent sexual offenders in the programme. The use of REBT greatly decreases if not eliminates the possibility of recidivism	Theoretical propositions not rigorously tested. Conclusions of effectiveness are unsubstantiated, except with reference to the author's experience, which is not a sufficiently valid or reliable data source to support the claims	0
Whitford and Parr (1995)	Descriptive, anecdotal	None	Many sexually offending young clients suffer from Low Frustration Tolerance and poor impulse control. When REBT method is practiced, maladaptive behaviours, emotions and beliefs are reduced dramatically and self efficacy is increased. REBT group treatment will reduce juvenile sex offending and therefore reduce sexual abuse in the community	Theoretical propositions not rigorously tested. Conclusions of effectiveness are based on the author's experience, which is not a sufficiently valid or reliable data source to support the claims	0
Marsh and Walsh (1995)	Literature review and anecdotal	Published literature, illustrative cases	Various aspects of client-centred therapy, transactional analysis, rational-emotive therapy and reality therapy are particularly well-suited to the counselling of sex offenders	Little critical appraisal of the literature reviewed. Claims based on personal experience, not substantiated with empirical study	0

Table 1 continued

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Winogron (1995)	Descriptive, anecdotal	None	REBT is well suited to work with young offenders and has direct and practical implications for therapeutic procedures and practices. Certain basic insights should be communicated to young offenders. Deep change is both desirable and achievable	Theoretical propositions not rigorously explored. Claims unsubstantiated	0
Valliant et al. (1995)	Quasi-experimental, comparison group design	Total N of 107 males, 44 in custody, 26 on probation and 37 university students	CBT treatment groups showed positive effects on psychometric measures of guilt, verbal hostility and resentment. Results may reflect positive effects of treatment or inmates desire to reduce conflict in serving sentence. Future research on effectiveness is needed with larger sample sizes	Study uses control group of questionable comparability, but acknowledges limitations in interpretation of findings and sample size	3
Tsytsarev and Grodnitzky (1995)	Literature review	Published studies	The literature indicates that emotional expression may contribute to a variety of offences ranging from drug abuse to serial murder and including physical assault, domestic violence, property destruction, robbery rape and other sexual assaults	Lacking in critical appraisal of the studies reviewed and the findings used in the conclusions, but rigorous in the use of studies including high quality methods	0

**Table 1** continued

Authors (study year)	Study type/research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Marquis et al. (1996)	Random allocation trial	84 Adult male offenders randomly assigned	Both violent and non-violent recidivism was reduced for treated offenders who undertook a substance relapse prevention programme in combination with an anger management programme (CALM), but for the comparison group of offenders who undertook only the substance abuse relapse prevention programme	Rigorous design yielding robust findings. Small sample size and sufficiently cautious interpretation	4
Henning and Frueh (1996)	Quasi-experimental comparison group	196 Male offenders in CBT group, 141 untreated comparisons	Findings offer tentative support for the use of a treatment approach with incarcerated offenders that focuses on cognitive distortions supportive of criminal behaviour, in the Cognitive Self-Change treatment programme	Fairly robust design with sufficiently cautious interpretation of findings. Small sample size	3
Vennard et al. (1997)	Narrative literature review	Published research	Programs that seek to modify offender thinking and behaviour patterns are generally more successful than techniques such as group and individual counselling and nondirective therapy. Cognitive-behavioural methods and social skills training show the most positive results with both juvenile and adult offenders	Lacking in critical appraisal of the studies reviewed and the findings used in the conclusions, but rigorous in the use of studies including high standard methods	0

Table 1 continued

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Zamble and Quinsey (1997)	Cross-sectional and short longitudinal survey design with comparison group	Total N of 547, half of which had re-offended, half of which had not at time of comparison.	Anger, depression and frustration were strongly implicated in offenders' relapse into offending after release from prison. Those who re-offended scored higher on anger arousal, anger expression and hostility than those who had not re-offended. For violent re-convictions, including assault and rape, the relapse was associated with at least one aversive emotional state leading to substance abuse	Fairly robust design but weaknesses in comparisons made between re-offenders and comparison group on point at which comparisons made, i.e. after offending for group of interest, and at same point in time for comparisons who had not yet offended	2
Dugan and Everett (1998)	Random allocation trial	145 Jail inmates randomly assigned to treatment and control groups	Analysis of recidivism for 2 years after treatment showed no significant difference between treatment group who participated in Reality therapy and non-treatment control group	Rigorous design but small sample that is not noted as possibly affecting the lack of an effect due to insufficient statistical power	4
Dowden et al. (1999)	Quasi-experimental before and after design	247 Adult male treated offenders	The Controlling Anger and Learning to Manage it programme was effective in reducing both violent and non-violent recidivism for high-risk offenders on pre-post treatment measures	Research design in not sufficiently rigorous as other explanations for observed change are plausible. Small sample size	3

**Table 1** continued

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Allen et al. (2001)	Systematic literature review	Published and unpublished evaluation studies	Research was limited and data was problematic but both moral reconnection therapy and the Reasoning and Rehabilitation programs appeared to be successful approaches to reducing recidivism	Rigorous exploration of the literature using critical appraisal and quantitative analysis to produce robust findings	0
Biggam and Power (2002)	Random allocation trial	46 Young offenders randomly assigned to treatment and control groups	Participants in time-limited CBT, group-based problem-solving training intervention experienced significant reductions in levels of anxiety, depression and hopelessness and improvement in self-assessed social problem solving abilities	Rigorous design but reliability of some construct measures untested	5
Proeve and Howells (2002)	Literature review—narrative	Published research	Distinction between internal and external shame is important with sex offenders. Aspects of treatment can be seen as a shift from shame towards guilt. More research needed on the implications of shame and guilt for treatment	Critical appraisal of literature reviewed to produce robust findings on current knowledge and limitations, but narrative nature of review and interpretation open to some bias	0
Pearson et al. (2002)	Meta-analytic study	69 Published and unpublished primary research studies from 1968–1996	Cognitive-behavioural treatment is associated with reduced recidivism rates. Effect is due mainly to cognitive-behavioural interventions rather than behaviour modification approaches	Rigorous statistical analysis of previous studies, producing robust findings	0

Table 1 continued

Authors (study year)	Study type/research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Friendship et al. (2003)	Quasi-experimental comparison group	667 Treated adult male offenders, 1,801 untreated comparisons	The cognitive skills programmes: Enhanced Thinking Skills and Reasoning and Rehabilitation, operated in prisons in England and Wales significantly reduced 2 year recidivism rates for programme participants	Fairly robust design with large sample size, but random allocation not used	3
Falshaw et al. (2003)	Quasi-experimental comparison group	649 Treated adult male offenders, 1,947 untreated offenders in comparison group	No significant differences in the 2 year recidivism rates for adult male prisoners who had participated in the cognitive skills programmes Enhanced Thinking Skills and Reasoning and Rehabilitation and comparison group offenders who had not	Fairly robust design with large sample size, but random allocation not used	4
Cann et al. (2003)	Quasi-experimental comparison group	2,195 Adult male offenders and 1,534 young offenders in treatment group; 2,195 adult male offenders and 1,534 young offenders in untreated comparison group	No differences in the 1st and 2nd year recidivism rates between adult men or Young Offenders who participated in the cognitive skills programmes Enhanced Thinking Skills and Reasoning and Rehabilitation and comparison group offenders who had not	Fairly robust design with large sample size, but random allocation not used	4

**Table 1** continued

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Latimer et al. (2003)	Longitudinal survey design with repeated measures	Representative sample of over 4,000 Canadian Youths	Of the number of life factors examined, e.g. friends, family, school, feelings and behaviours, health, work, and delinquent behaviour, five were found to be consistently related to various forms of delinquency for both male and female youths. These were inconsistent and inadequate parenting, a history of victimization, antisocial peers involvement, negative school attachment, and aggression	Rigorous design producing robust findings from a large sample	1
Tibbetts (2003)	Survey design using psychometric tests and self- report	224 College students	Self-conscious emotions (shame, guilt and pride) are important causal factors of offending. Pride was positively correlated with offending, while guilt was negative associated with offending. Relationship between shame and offending varied with type of measure used	Weak design using unreliable construct-measures and of questionable relevance to real offending population	0
Vannoy and Hoyt (2004)	Randomised control trial	Total N of 31 adult males in low security prison	Treated offenders had significant reduction in anger relative to control group. The CBT-based program that employed principles from Buddhist psychology was effective in reducing anger	Rigorous method employed but small sample size is subject to sampling error, that might make observed outcomes specific only to this sample	4

Table 1 continued

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Sukhodolsky and Ruchkin (2004)	Correlational study	361 Young offenders and 206 high school students—Russia	Offenders reported higher levels of anger and a higher frequency of aggression and antisocial behaviour than students. No difference in normative beliefs between the two groups were found. Relationship between physical aggression and antisocial beliefs was not significant	Robust method but evidence of validity and reliability of tools used to measure constructs was not strong	1
Ryan and Redding (2004)	Summary of literature	Published research	Major depression is more prevalent among juvenile offenders than in the general population. Effective treatment of a juvenile's mood disorder may help diminish delinquent behaviour	Little critical appraisal of the research cited and claims asserted in absence of rigorous testing of theoretical propositions. Reasonably robust findings on associations	0
Van Voorhis et al. (2004)	Randomised control trial	468 Parolees randomly assigned to treatment and comparison groups	No statistically significant difference between experimental group attending Reasoning and Rehabilitation Programme and control group on various outcome measures	Rigorous design yielding robust findings	5
Hollin et al. (2004)	Quasi-experimental comparison group	2,230 Treated offenders in the community and 2,645 untreated comparisons	Offenders participating in general offending behaviour programmes including Enhanced Thinking Skills and Reasoning and Rehabilitation, were reconvicted at a higher rate than offenders in the comparison group after statistical control of differences in risk	Fairly robust design with large sample size, but random allocation not used	3

Table 1 continued

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Howells et al. (2004)	Survey design of different data sources	Different samples of sex offenders	The evidence broadly supports the conclusion that a causal relationship exists between affective and emotional states and sexual offending, at least for some offenders	Rigorous survey design of different representative samples, using triangulation of different data sources and critical appraisal of findings from other studies	1
Ray et al. (2004)	Survey design using qualitative interview data	33 Interviews with racist offenders	Unacknowledged shame can be transformed into rage against those who are viewed as the sources of shame	Moderately rigorous survey design, triangulating different sources of data, but based on a small sample	0
Tangney and Stuewig (2004)	Theoretical/ anecdotal	Published research and case examples	Shame may not be all bad in all contexts. With offenders, the existence of shame or any self-evaluative emotion may aid rehabilitation and redemption	Theoretical propositions not rigorously explored. Claims unsubstantiated	0
Wilson et al. (2005)	Systematic literature review/meta-analysis	Published literature	CBT treatments are effective at reducing criminal behaviour among convicted offenders. Reduced recidivism was observed specifically for Moral Reconation Therapy, Reasoning and Rehabilitation and various cognitive-restructuring programs	Rigorous exploration of the literature using critical appraisal and quantitative analysis to produce robust findings	1

Table 1 continued

Authors (study year)	Study type/ research design	Sample details	Findings and conclusions	Quality appraisal of research design, methods, findings and conclusions	SMS-rating
Welsh and Farrington (2005)	Summarises conclusions from systematic reviews	Published literature—13 systematic reviews	Some of the effective programming efforts fall under social skills training for children and cognitive- behavioural therapy. The development of a program of research on new crime prevention and intervention experiments is needed	Summary of rigorous systematic reviews and meta-analytic studies	1
Tong and Farrington (2006)	Systematic review	11 Evaluation studies	The Reasoning & Rehabilitation programme was effective in Canada, the United States and the United Kingdom, in community and institution settings for low and high risk offenders, producing overall a 27% reduction in recidivism for treated offenders compared to controls	Rigorous exploration of the literature using critical appraisal and quantitative analysis to produce robust findings	1

## Appraisal of Research Quality

A slightly extended version of the Maryland Scientific Methods Scale (SMS; Sherman et al. 2002) was used in this research. The SMS is used to evaluate the reliability of the effects of criminological interventions based on the methodological quality of the study design, using a five point scale.<sup>5</sup> It has been used in a number of criminal justice studies to appraise research quality (Harper & Chitty 2005). This research extended the five point scale to include a zero rating for methods that are not suited to evaluation research. The full scale is described in the table below.

### Maryland Scale

Study design and rating	Score	Description of rating
Design or method not suited to evaluation	0	Reporting of anecdotal findings, selective case study material, narrative or systematic literature reviews only, absence of any empirical aspect to the research, and reporting of theoretical exposition
Correlational study	1	Reporting of a correlational coefficient denoting the strength of the relationship between a particular intervention and its effectiveness in preventing reoffending at a given point in time
Pre and post test with no control group	2	Reporting of a comparison group present, but this might lack comparability to the target group. Alternatively, where no comparison group is present, before-and-after measures (of offending behaviour, for example) have been obtained for the target group
Observational cohort study with comparable group/quasi-experimental	3	Reporting of a controlled experimental design with comparable target and control groups present, with pre-and-post comparisons being made and experimental-control comparisons on (a) specific variable/s
Quasi-experimental/controlled trial	4	Reporting of a controlled experimental design, as in (3) above, but with additional controlling for other variables that might pose a threat to the interpretations of the results. Examples of controlling extraneous variables include, but are not limited to, the use of statistical procedures or matching
Randomised control trial	5	Reporting of a fully randomised experimental design in which target and control groups consists of randomly assigned individuals and appropriate measures are taken to test for the effects of the intervention

Only those studies that scored three, four or five for methodological quality were included for further analysis in this research.

All thirty-six studies were rated by the first author of this report and another researcher independently, in order to determine the extent of agreement on the ratings assigned and thereby highlight any potential bias. Thirty-one studies were

<sup>5</sup> The scale is limited by not further appraising the quality of each type of design or allowing for the possibility of low standards in superior evaluation methods.

given the same rating by both researchers. Five studies showed disagreement by a difference of one point, however, this difference did not affect the category of inclusion for further analysis, for which there was 100% agreement. A statistical test of inter-rater reliability using the Kappa statistic was performed to determine consistency between the raters. Results showed  $Kappa = .73$ , ( $p < .001$ ), 95% CI (0.56, 0.89), giving some assurance of consistency in quality appraisal.

## Search Results

The first searches produced 812 publications. Of these, 500 abstracts were selected for further examination. Of the 36 abstracts retained, eight specifically referred to the use of REBT with offenders, ten addressed the relationship between emotional disturbance and offending. Another nineteen were considered even though they did not refer specifically to REBT, because they referred to Cognitive Behaviour Therapy (CBT) with offenders (seven studies), or programmes that combined methods from CBT, REBT, skills training and other models. (Twelve studies<sup>6</sup>) In particular, evaluation studies that mentioned the Reasoning & Rehabilitation Programme (R&R), the Enhanced Thinking Skills Programme (ETS) and the Controlling Anger and Learning to Manage (CALM) programme, were retained because all three of these programmes include several sessions on emotional management that draw specifically on the philosophy and methods of Rational Emotive Behaviour Therapy. Additionally, studies that referred to the Cognitive Self Change Programme and Reality Therapy, were also included as interventions that directly employ or draw on methods used in REBT. Over 760 publications listed from the initial searches were not relevant to the research question based on the contents of the publication summary or research abstract and they were not examined any further.

## Results

Table 1 summarises the findings from the research publications examined and appraised in the current research. It is ordered chronologically, and includes all research relevant to answering the question of this. Specifically, (a) evidence of the need for an intervention that deals with emotional disturbance or irrational beliefs in offender populations, and (b) evidence of the effectiveness of interventions using REBT in changing offending behaviour.

The few studies that have reviewed the literature on REBT effectiveness over the years (Lyons & Woods 1991; Engels et al. 1993; Solomon & Haaga 1995; Neenan 2001), indicate that the support for REBT as an effective therapeutic intervention is not particularly strong. While some have concluded that REBT is an effective form of therapy when compared to baseline and other forms of control (Lyons & Woods 1991), and others have discussed the methodological flaws and limitations of REBT evaluation research (Engels et al. 1993; Solomon & Haaga 1995), the most recently

<sup>6</sup> These figures sum to 37 and not 36 because there was some overlap on the subject areas for two studies.

expressed published view is that the empirical evidence in support of REBT continues to be lacking after 45 years (Neenan 2001).

Of the studies reviewed and appraised for research quality, seventeen were rated as '0', six as '1', one as '2', five as '3', five as '4' and two as '5'. Only the twelve studies with the three highest ratings had their findings and conclusions considered further in this research. It was notable that the studies rated as being of a higher standard were found amongst the more recently published papers, suggesting some improvement over time in the quality of research conducted and published. The better quality studies were not particular to one subject area. Across all of the evidence considered in relation to the points of interest, studies of poor quality and better quality were found.

## Discussion

On the strength of the better quality studies, that is, those rated as '3', '4' or '5', this literature review can offer the following in response to the research questions:

- (a) What is the evidence of the need for an intervention that deals with emotional disturbance or irrational beliefs in offender populations?

The evidence moderately indicates an association between negative emotional states such as anger, shame and guilt, and offending behaviour, and therefore the need for an intervention that treats the problems of such emotional states, in addressing offending behaviour, is somewhat supported.

- (b) What is for the current state of knowledge about the effectiveness of interventions using REBT, in changing offending behaviour?

There is some evidence that indicates that interventions using REBT may reduce offending behaviour from studies of such programmes that have produced positive treatment effects. However, the findings of a treatment effect varies and it is not possible to determine what specific contribution REBT made to the observed treatment outcomes.

### Limitations of the Research

The findings of this study are limited by the search procedures used, the search terms, the databases searched and the reliance on research published in the English language. The studies retrieved with these methods may be subject to any publication bias that the publishers have toward findings of statistical significance. There is, however, some indication that this may not be the case through the inclusion of published studies that did not find differences of a statistically significant nature.

The narrow range of search terms used may have resulted in the exclusion of other relevant research studies that may have affected the overall findings of this research. Studies which looked specifically at the cognitive and behavioural causes of offending, using a formulation from REBT or CBT were not included. However,

the use of the key terms of interest can reasonably be expected to have picked up the studies which focused on the subject of interest or made mention of the key terms in the title, abstract, or full text.

### Implications for the Practice of Rational Emotive Behaviour Therapy

The main implications for these research findings on the practice of REBT, is that much more needs to be done to test the application and value of REBT with offender populations.

### Proposals for Further Research

1. Further evidence is needed to build on the finding that cognitive-behavioural interventions that combine REBT methods with CBT and social skills training, have produced both favourable and unfavourable results on re-offending. More evaluation is needed of the component parts of such interventions and the effect each therapeutic approach has on the targets of treatment, such as problem-solving, emotional management, and social skills as well as desistance from offending.
2. To build on the finding that the effects of REBT on re-offending are not fully known, it would be necessary to first implement REBT as a therapeutic approach in a criminal justice setting, on a large enough scale to make evaluation using a randomised control trial, a possibility. Offenders would need to be randomly assigned to receive REBT or a non-therapeutic alternative, and the outcomes for each would need to be compared to determine what effect REBT had on re-offending and other outcomes of interest, such as emotional-management, and pro-social behaviour.

### Conclusions

This study set out to consider the published evidence on the use of interventions employing Rational Emotive Behaviour Therapy in criminal justice efforts to reduce re-offending, by considering the evidence from various types of published research relevant to the subject. It found that the evidence indicated a possible need for an intervention that addresses the problems of negative emotional states in offenders, for which REBT may be well suited. It also found mixed evidence in support of the use of REBT as an effective intervention in reducing offending. It can be concluded that REBT *might* be a promising approach for aiding the criminal justice aims in England and Wales to reduce re-offending, but more work needs to be done to test it out and evaluate its effects.

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