

Corrections Research:
User Report

**Managing Prisons Effectively:
The Potential of Contingency
Management Programs**
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Abstract

There has been increasing interest in the prison management policy area to promote a course of action that holds inmates more accountable for their actions. It has been proposed that inmates need more structure and discipline and engage in activities that will demonstrate they truly earn privileges leading to early release. This study draws attention to a long forgotten prison treatment literature known as contingency management (e.g., token economies) which has the potential to meet the goals of an “accountability” management perspective. The contingency management (CM) literature was reviewed to assess its potency for improving inmates’ performance (e.g., prison adjustment, educational/work skills) and to generate a list of principles nominated by experts in the area for managing CM programs effectively. First, it was found that CM programs produced large positive gains in the range of 60%-70% which surpassed the effectiveness of other types of interventions. Secondly, the list of principles tabulated for delivering CM program were categorized as to how to implement them and deliver the service (i.e., strategies for what to do, not to do and problematic issues). It was concluded that following the course of action recommended by experts for running CM programs with fidelity placed tremendous demands on all of the prison stakeholders. Unless a number of conditions were met, CM programs should be approached with a great deal of caution given the nature of prison settings.

Authors’ Notes

This report was prepared under contract to the Department of Public Safety Canada. Views expressed herein are those of the authors and do not necessarily reflect those of the Department. The first author is a Professor Emeritus, University of New Brunswick, and Visiting Scholar at the University of North Carolina Charlotte. Shelley Listwan is an Assistant Professor at the University of North Carolina Charlotte. Joseph Kuhns is an Associate Professor at the University of North Carolina Charlotte. Further inquiries about this report may be forwarded to Shelley Listwan at University of North Carolina Charlotte, Department of Criminal Justice & Criminology, 9201 University City Blvd, Charlotte, NC 28223 or slistwan@uncc.edu.

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Managing Prisons Effectively: The Potential of Contingency Management Programs

The management of prisons has been the subject of a great deal of controversy (Gendreau & Smith, in press) with the pendulum having shifted dramatically within the three countries considered leaders in penology - Canada, the United Kingdom, and the United States. At one extreme, the United States embarked upon what Cullen (1995, p. 340) labelled the “mean season” of American corrections, an era characterized by huge increases in prison populations (Simon, 2007). In order to deal with this latter reality, prison managers have had few options for controlling their environment but to place extreme limits on prisoners’ activities which partially explains the tremendous growth and popularity of supermax facilities (Mears & Watson, 2006; Pizarro & Stenius, 2004).

In contrast, while the rehabilitation agenda was being abandoned in American penal systems in the 1970s (Cullen & Gendreau, 1989), Canada’s correctional system (Correctional Service of Canada (CSC)) pursued an opposite course by deciding not to build more prisons and increasing their existing commitment to treatment programming (for some of the reasons that supported this development see Cullen, 2002). Similarly, His Majesty’s (HM) prison service followed suit when they embarked upon a major rehabilitative agenda in the 1990s (Goggin & Gendreau, 2006; Table 7.1 p. 223-226; McGuire & Priestly, 1995).

Correctional policies, however, are highly volatile, driven as they are by politically generated “common sense” ideologies on crime issues that are bereft of any scientific credibility (Gendreau, Cullen, Goggin, & Pappozzi, 2002; Gendreau, Smith, & Theriault, 2009). Thus, it comes as no surprise that each of the aforementioned countries has shown some signs of rethinking their correctional policies. While it is still very early to tell, the United States appears to be softening some of their punitive approaches (Listwan, Jonson, Cullen, & Latessa, 2008), although it is unclear whether this has been due to changes in the political winds and other related influences (Gibbons & Katzenbach, 2006; Petersilia, 2003; Webb, 2009), or more likely compelling fiscal reasons which has left many states with no choice but to release prisoners as expediently as possible (Pew Foundation, 2009). Whatever the case, at least a few American jurisdictions have been considering linking programming with earned release to facilitate the management of prisons (Lattimore et al., 2004; Levin, 2010; Porter, 2011).

Many years after the United States began “getting tough” on criminals, Canada decided to emulate their lead (Andrews & Bonta, 2010; Macleod, 2010). In so doing, the political masters of the Correctional Service of Canada (CSC) generated a politically astute policy that did not disavow CSC’s proud rehabilitative past but, in no uncertain terms, appealed to other stakeholders in the public arena (e.g., the government’s politically conservative electoral base, police, and victims’ rights groups) who felt the system was “soft” on inmates. The new agenda proclaimed inmate accountability must now be the paramount goal of the prison system (Sampson et al., 2007). More discipline (e.g., immediate consequences for good/bad behaviour) and increased structure through education and work programs would be the order of the day. This would serve to meet two goals; a) managing prisons more efficiently with the expected influx of inmates which the Sampson et al. (2007) report predicted would be more difficult to manage, and b) ensuring that inmates would truly merit early release.

The lattermost issue was a critical piece of the puzzle because of the longstanding dissatisfaction in Canada and the United States with earned remission/good time credit/parole systems (Ross & Barker, 1986). These procedures have been criticized as being vague, overly complex, inconsistently administered, and with undue delays in the delivery of reinforcements thereby making the incentives meaningless to the inmate and their custodians (Ross & Barker, 1986; Weisburd & Chayet, 1989). These programs have also been accused of being easily corrupted leading to an escalation of ethically suspect coercive practices (Ross & Barker, 1986). Moreover, the design of these programs was often backward as inmates were granted good time upon admission before they demonstrated good reasons why they should

progress in the system. To deal with these issues, Canada was influenced by the policies emanating from HM prison authorities (Gendreau, 2003) where powerful incentives (e.g., higher levels of pay, better accommodation, longer and more frequent visits, temporary release, and parole consideration) were made contingent upon good conduct (Liebling, 2008).

While it is one thing to propose sweeping new changes, completely left unsaid by proponents of accountability and incentive programs is what form they should take and how they function in practice. In this next section we will bring to light a rich and intriguing treatment literature, known as contingency management (CM). Once fashionable in corrections, CM has been relegated to the dustbin of prison treatment history. Now, however, if the thinking behind the foregoing proposals gains currency amongst policy makers and political stockholders, CM may be revived to have a major impact on prison programming.

Contingency Management Programs

Contingency management (CM) programs are based on the principles of operant conditioning (for a general review see Rimm & Masters, 1979; Spiegler & Guevremont, 2010). The term CM is based on the principle of contiguity that suggests that when reinforcement and punishment are made contingent upon a behaviour, the behaviour in question is either strengthened or suppressed. As a rule of thumb, positive reinforcement has been used for several reasons; chiefly amongst them being ease of use, ethics, and the fact that it teaches an individual what to do whereas punishment tells the person what not to do (Gendreau, 1996). The most common CM method used with inmates by far has been the token economy (TE) which is a procedure whereby tokens/points are earned for “good” behaviour and can be exchanged for tangible goods (money, material goods), desirable activities (sports, recreation, TV, socialization), social reinforcers (praise, approval), and eventual release from prison. Other standard CM programs are behavioural contracting, over-correction, response cost (fines), and time out. The latter three are punishments.

One of the fascinating stories in penological reform is that CM was the first treatment program, as we know them in modern day terms, to be used in prisons (for other examples, see Ross & Barker, 1986). Credit is due in this regard to the pioneering reforms of Alexander Maconochie. Upon being placed in charge of the British penal colony in a remote island of the South Pacific by HM prison service in 1840, Maconochie made early release contingent upon good behaviour with, as it turned out, a great deal of success. Regrettably, his bold reforms were subsequently disbanded (Barry, 1958). Just over a century later with the rise in popularity of behaviour modification programs (Rimm & Masters, 1979), for about two decades CM programs became a major force in many applied settings and prisons were no exception (Johnson, 1977). A decade later, however, CM programs again all but vanished from the correctional landscape. This was due to the changing social context of the times (i.e., 1970s) when they were equated with Clockwork Orange or brainwashing techniques, encountered legal challenges (this was certainly the case in corrections) and were supplemented by the ever growing popularity of social learning and cognitive behaviour therapies (Geller, Johnson, Hamlin, & Kelly, 1977; Johnson, 1977; Milan, 1987; Wormith & Heald, 1986).

Nevertheless, when revisiting the CM studies of 40 years ago, one is impressed with the quality of the research designs (e.g., repeated measure within subject designs) and some of the large gains reported in improving prosocial behaviours ranging from academic performance to prison adjustment (Braukmann, Fixsen, Phillips, & Wolf, 1975; Milan, 2000). From an accountability perspective, CM programs, particularly token economies, seem ideal. They are self-rehabilitating in that they place the onus on offenders in a firm and fair way to exhibit personal responsibility to achieve benefits from the system. They are transparent and because of their monetary “business” orientation (Winkler, 1971), CM programs can be translated into cost benefit equations for administrators concerned with the bottom line.

Correctional officers, an underused resource in the minds of some in corrections, have been found to be effective front line service delivers of token economies with proper training and experience (Smith et al, 1985; Smith, Milan, & Wood; 1976). In addition, CM programs, with their high degree of structure with immediate rewards, may be particularly appropriate for higher risk, unmotivated/acting out inmates who have been unresponsive to prison authorities (Sampson et al., 2007). Finally, and this is important for politicians and correctional administrators, some CM programs have been highly visible and attracted very favourable media coverage for the powers that be¹.

While the literature reviewed above suggests that CM programs have been effective (Morris & Braukmann, 1987) there has been no quantitative evaluations of this literature that provides a precise estimate of their reputed effectiveness, nor has there been any summary of the management principles that contribute to their success.

Thus, the purpose of this review was twofold. The first generated a meta-analysis of the effects of CM programs in prisons or closed institutions on institutional adjustment, educational/school and work performance and other variables identified by studies. The second purpose consisted of a narrative review of the qualitative literature on CM programs where “experts” nominated principles that were predictive of their success or failure.

Method and Procedure

Literature Search

The literature search for the meta-analysis of CM programs effect on institutional behaviours and the summary of “how to” manage CM programs was conducted using the ancestry approach (e.g., retrieval of references from existing literature reviews (e.g., Davidson & Seidman; 1974; Gellner, Johnson, Hamlin, & Kennedys, 1977; Milan, 1987) and electronic searches (e.g., Google scholar, PsychINFO, psychARTICLES)). The search terms included: a) general topics in behaviour modification (e.g., contingency management, punishment, and token economy), b) terms specific to offender populations (e.g., offenders, prisons, and closed institutions of other types (e.g., psychiatric hospitals, residential settings), and c) texts and review articles on the administration of CM programs in general and with offenders.

To be eligible for the meta-analysis the study must have: a) involved offenders who had been the recipients of a CM program, defined as having at least one of the following behaviour modification techniques of behavioural contracting, response cost, time out or token economy, b) utilized methodologies typical for CM program (e.g., single case designs in which each subject served as their own control with a continuous assessment of the offender’s behaviour over the course of the intervention, as well as for baseline periods), and c) measured increases and decreases in performance within the confinement setting.

Coding Procedures

Studies in the meta-analysis were coded on the following characteristics: year of study, study setting (prison, training school, community based closed setting, hospital), age group (youth vs. adult), gender,

¹ The Marquis et al. (1974) vocational token economy in Ontario employed high risk inmates to produce toys for hospitalized mentally disadvantaged children and psychiatric hospital patients (inmates dispensed the toys personally). The program received extensive coverage in the national press. It was later closed because of a shortage of supplies.

offender risk level (higher vs. lower), dosage level of treatment in days, and type of CM procedure. All of the studies were coded independently by the second and third authors and discrepancies were resolved through mutual discussion and review. Studies in the narrative review were selected and categorized by the second author.

Effect size calculation and interpretation

The approach to meta-analysis depends on a field's approach to methodology, data analysis, and limitations therein (e.g., limited number of studies, small sample sizes, lack of information on potential moderators and differential effects on different target behaviours). The meta-analytic approach taken in this study was a "bare-bones" Glassian meta-analytic perspective (see Gendreau & Smith, 2007, p.1553, note 5; Hunter & Schmidt, 2004). In this attitude to data analysis, a broad inclusive picture of a research literature is drawn that provides a general overview of the effectiveness of an intervention until more data is forthcoming allowing for more focused analyses.

As of yet there are no fixed rules for analyzing applied behaviour analysis designs that monitor the behaviour of single subjects (Shadish, 2001). Following the recommendations of Fidler (2002) and Gendreau and Smith (2007), the basic "raw units" of the dependent variables were the metric (e.g., minutes of time studying, number of stealing incidences). CM study outcomes - this is typical for applied behaviour analysis experiments - almost invariably report percentages or graphs from which a percentage can be interpreted. When calculating the overall effect size for the studies in the database, a transformation was used for those that reported gain scores or improvements in performance. In these instances, the overall percentage gain was limited to a maximum of 100% (e.g., a study that reported improvement of 300% was recoded as a gain of 100%). 47% of the improvement effect sizes were recoded this way. This was done because CM studies that reported their data in terms of percentage reductions were limited to 100% and for comparing the results to a meta-analysis of cognitive behavioural programs where a 100% improvement was the maximum score achievable (French & Gendreau, 2006). Most of the CM studies used standard ABAB designs, although some were more elaborate and extensive (integrated reversal procedures, and/or otherwise studied subject changes over longer periods of time and across multiple experimental conditions or repetitions). In those cases, and for purposes of simplicity, we coded the mean percentage change in the behaviour across all of the contingency management periods as the effect size for that particular sample. We also calculated the number of treatment replications within each study which is an index of treatment dosage level.

Point estimates (mean percentage change) and confidence intervals (CI) were used to express the precision of the estimate. Following the guidelines established in the literature (Campbell, French, & Gendreau, 2009; Cumming & Finch, 2005; Gendreau & Smith, 2007; Schmidt, 1996), CIs that were based on less than 10 effect sizes, had a width greater than .10 and/or that included 0 (a CI that includes 0 can be interpreted as $p > .05$, but this does not mean there is no effect) were considered imprecise, thereby requiring replication for the purposes of reaching firm conclusions about the utility of the results.

Results

Study 1

Description of sample

The 20 studies in the meta-analysis were published between 1965 and 2004 (75% from 1965-1977). The study settings were almost equally divided between prisons, training schools, closed residential units, and psychiatric settings (20%-30%). Study samples ranged from 1 to 56 (total N= 364). 50% of the studies served youths, 30% adults, and 20% were mixed. Only one program consisted solely of females. Risk

level was calculated for 16 studies; 12 samples were rated higher and 4 lower. Token economy programs dominated (80%) while 20% used punishment or mixed CM strategies. 13 studies reported treatment dosage levels which generated 26 effect sizes. The mean number of replications of treatment for all of the studies combined was 3.4. The mean treatment dosage was 103 days (SD = 106). Of the target behaviours listed by the studies, 37% were institutional adjustment (aggression, anti-social attitudes, fighting, stealing), 35% were educational and school performance related (comprehension, participation), 9% were work related (manufacturing items), and 21% were “other” (hygiene, self-esteem, socialization). The 20 studies produced 50 effect sizes. Only one study failed to improve the performance of its participants.

Overall effect size

In order to estimate an overall effect of the CM, we recoded all effects to a maximum of 100%. The mean percentage change in program participants improvement on the target behaviors during experimental phases compared to baseline phases, was 66% (ranging from a low of less than one percent to a high of 100%, SD= 33.9, n=364, and a 95% CI of 62.5% to 69.5%).²

Moderator effect sizes

Effect sizes for all categories of moderators included one of the following: a CI interval that included 0, a width greater than .10, and less than 10 effect sizes. Inspection of the data revealed some very tentative trends in magnitude: smaller sample sizes were associated with higher effect sizes ($r = -.22$; CI = $-.49$ to $.05$), and higher effect sizes were associated with more dosage ($r = .21$; CI = $-.11$ to $.53$). Lower risk level had 20% higher improvement rates than their higher risk counterparts.

Study 2

Principles of effective CM programs

31 narrative articles and book chapters, as well as nine studies in the meta-analysis, contributed to the following two categories of principles: that of implementation and three subsets within the treatment domain (positive or things to do, negative or things not to do, and problematic, in other words, a course of action that must be approached judiciously). Additional clarifications were provided, where appropriate, for some of the items.

Implementation Principles

1. Assess whether the institution can meet the goals of accountability without using a CM program.
2. Assess, if the answer to the above is no, the readiness of the setting based on its organizational culture, past history of success in implementing programs, and management and staff characteristics.
3. Implement the program incrementally (start with only one institution and preferably one unit within it that has administrative autonomy).
4. Establish a code of professional and program ethics which all stakeholders are beholden to.
5. Determine whether participants have the ethical and legal right to refuse participation and, if so, what the consequences may be.

² The CI could be calculated using an n of 751 which represents multiple samples from single studies that included more than one calculated effect size. In this case the CI becomes 63.6% to 68.4%.

Treatment principles

a) Positive

1. Positive reinforcement predominates over punishment by a ratio of 4:1.
2. Reinforcement menus should take into account what inmates claim will motivate their performance (at least 10 items).
3. Use a level system of rewards with higher levels relying less on concrete reinforcements. The steps between levels should be demanding of the participants and the distribution of the inmates at each level should be approximately the same.
4. Reinforcement should be performance based rather than “salaried” (as with typical prison incentive protocols).
5. The time needed to progress from one level to another must be flexible. Passing criteria must be made explicit, consistent, and with no exceptions.
6. Precise and unambiguous definitions apply to all behaviours (i.e., performance based activities, criminogenic attitudes/beliefs) targeted for change.
7. Contingencies should be verbally restated and clarified if there are concerns that there will be delays in receiving the reinforcement or punishment (a common problem in prisons because of the bureaucracy, shift changes, etc)

b) Negative

1. Do not target trivial behaviours (e.g., boot camp regimes, obsequious response to commands, neat beds, etc).
2. Do not allow participants to go into debt or hoard tokens/points.
3. Do not allow deflation and inflation in the economy.
4. Do not use threats - they have no immediate consequences - as a substitute for punishments nor humiliation strategies (e.g., boot camp drills, obsequiousness to commands) which will produce psychological inoculation to program rules.
5. Do not dispense reinforcement or punishment in a rote, stereotypical manner. Operant learning models must serve as a teaching moment where it is demonstrated how situational and personal factors have led to the offenders’ successes or failure in the particular instance. The offender must understand that while there are occasional circumstances or barriers to achieving a pro-social goal, they “own” their behaviour (i.e., intrinsic motivation) and should assume personal responsibility.

c) Problematic

1. Group rewards may be effective but staff must closely monitor attempts at coercion by influential peers who wish to control the reward process.
2. Some CM protocols aim to establish a “positive peer culture” where, in effect, the peers eventually become the behaviour modifiers. If this is the case, the above noted caveat applies. These programs, while potentially very effective, require very close monitoring by program staff.

3. Punishments are complex. They are a second option with adults. If not implemented properly, they can easily develop into coercive regimes and increase antisocial behaviour. Assuming punishments are applied with fidelity, response cost works particularly well if participants have a choice in how fines are administered (e.g., when a participant does not want to conform such as miss a class, not show up for work etc, then payment must be made for the privilege of opting out). Time out works well with juveniles but may be challenging with adults. Overcorrection, that is, physically correcting an anti-social behaviour, may lead to an escalation of physical confrontation with adults.
4. Participants should be chosen carefully. Generally, a relatively homogenous group of inmates will be easier to manage unless enough resources are available to meet individual differences amongst inmates (generally, always a good idea). For example, resistant inmates or those with intellectual and psychological handicaps, the Premack principle has been found to be helpful (i.e., successful completion of less favoured activities will lead to more highly desired ones such as completion of an academic goal leads to more recreation).

Discussion

The meta-analysis from study 1 revealed that CM programs produced substantial improvements on institutional adjustment, educational and work related behaviours. The plausible mean effect size was in the range of 63% to 70%³ which was a conservative estimate because studies that reported results as percentage improvement were limited to 100%. In fact, there were several studies in the database that produced gains up to several hundred percent (e.g., Milan, Wood, & McKee, 1979). Impressive also was the fact that CM studies frequently replicated their interventions (an average of 3.4 per study) which is a hallmark of good scientific practice for determining the reliability of a program's effect.

The only database with which to compare the magnitude of the above findings, and this only for prison adjustment outcomes can be found in a narrative review and meta-analysis by French & Gendreau (2006). They reported small to negligible effects for a sparse literature for strategies such as diet, educational/vocational programs, environmental design, crowding reduction, situational crime control, but relatively strong outcomes for cognitive behavioural programs (39 effect sizes, CI= 17% to 33%) (see French & Gendreau, 2006, p. 187-188, 199).

From a theoretical perspective, CM programs have impressive construct validity. They are grounded in biological, personality, and criminological theories of crime (Akers, 1998; Eysenck & Gudjonsson, 1989; Milan, 2000). Rooted as they are in radical behaviourism, CM was the necessary foundation for the development of social learning and behavioural cognitive therapies (Gendreau, Smith & French, 2006). Moreover, the fact that CM programs are behavioural and can utilize the Premack principle to individualize services is consistent with the general and specific responsivity principle of Andrews & Bonta's (2010) theory of effective correctional treatment⁴. The dosage findings (e.g., 100 hours on average for studies in this database) correlated improved performance (the CI contained 0) was congruent with what has been recommended for prison cognitive treatment programs (Bourgon & Armstrong, 2005). Thus, there is no reason why CM programs cannot be complimentary and co-exist with cognitive behaviour therapies. In fact, many prisoners take the view that enrolling in cognitive programs is an incentive (Goddard & Gendreau, 1990).

³ The results from Glassian "bare-bones" meta-analysis have held up over time in the areas of psychotherapy effectiveness in general and behavioral programs with offenders (Gendreau & Smith, 2007).

⁴ Counter to Andrews and Bonta's risk principles, lower risk participants in CM had greater gains, but this was the variable that posed the most difficulty in coding. Several studies were also missing data on risk.

Granted the above findings, one concern is that the size of the CM data base was modest (n= 364) although it could be argued that effect size estimate was precise (CI width < .10) and there was near uniformity in the direction of the results. There are no indications that more studies will be forthcoming which means it is incumbent upon any correctional system that embraces a CM agenda to have a vigorous self-evaluation research agenda. A rule of thumb is that sample sizes of at least several thousand are needed to reach firm policy conclusions in offender treatment and prediction research (Gendreau & Smith, 2007). Furthermore, the data base had little to offer regarding the utility of potentially important moderators (e.g., age, gender). It is not clear whether CM interventions have differential effects on various target behaviours. Additionally, it must be recognized that CM studies are not without methodological issues (Davidson & Seidman, 1974). There could be a literature of unsuccessful CM studies that were hidden in file drawers. However, in the past behaviour modifiers have not seemed reluctant to air their dirty laundry (e.g., Geller et al., 1977; Laws, 1976).

The results from study 2 are what would be expected for an intervention that relies on the application of powerful consequences that are contingent upon immediate and accurate assessment of behaviours in prisons over the course of the day. The very nature of token economies requires line staff to react with alacrity to the many problems and issues that arise daily. This point is emphasized because we have a sense that promoters of accountability regimes may be underestimating the demands CM programs place on administrators, professional and line staff and outside agents (e.g., parole authorities) to behave consistently and fairly and deliver on the promises made to inmates for successful completion of CM programs. There has been a depressing history of how CM programs, particularly token economies, are volatile and easily sabotaged (Cullen & Seddon, 1981; Geller, et al., 1977; Hall, 1979; Hall & Baker, 1978; Laws, 1974). Unlike standard fare counselling or work programs which can be introduced with a minimum of disruption, CM affects the entire history of the prison's culture and ways of doing things. Readers familiar with how prisons operate will recognize several of the recommendations in study 2 offer a tremendous challenge. Said in another way, it is not just the inmate's behaviour that is being modified!

There are a myriad of issues to discuss here that go beyond space limitations of this paper. We will touch upon just a few that are indispensable. Program implementation is likely the most essential determinant of whether a program succeeds or not (Gendreau, Goggin, & Smith, 1999; Goggin & Gendreau, 2005). Recommendation 2 under the implementation results may be paramount. Here, organizational culture speaks to organizational harmony, staff turnover, response to new issues/problems, in service training and self evaluation and fiscal responsibility. Management and staff factors refer to previous experience and professional qualifications⁵ to run programs and a belief in the value of rehabilitation. In addition, prison authorities have to wrestle with the concept of informed consent, not an easy matter to reconcile and adhere to an ethical code of service delivery (Wormith & Heald, 1986). Is the system prepared to have a menu of meaningful reinforcers⁶? Often that has not been the case in the first author's experience where punishers prevail⁷. Finally, contingency management systems demand a strong administrative support system re: record keeping and constant updating of inmates progress for program evaluation purposes.

⁵ Psychologists are the professionals best qualified to run operant programs, regrettably, psychologists with this expertise are in short supply (Gendreau, 2003).

⁶ Goddard & Gendreau's (1990) survey of inmate preferences, the only one we have seen in the literature, found they valued parole, temporary absences, visits, and program participation. Low on the list were recreation and incentive allowances. No visits and higher security were highly rated punishers while punishers commonly used in prison like administrative segregation, threats, fines, and loss of remission were not.

⁷ Possibly because of the nature of prisons and the attitudes of some staff, punishers can escalate dramatically (see Bassett & Blanchard, 1977).

Conclusion

In summary, of all the treatment interventions available to correctional authorities, CM programs are the best fit with the ethos of accountability type policies and the use of incentives to promote discipline, structure, and motivate inmates to earn the right to receive more privileges leading up to early release. Indeed, we would suggest that if correctional organizations were to pay heed to the principles outlined in study 2 they would be far better off in a number of ways, not being the least of running their settings in a safe and humane fashion. The question is, is there a will to do so. The CM literature has set very high standards for all stakeholders.

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(References with one asterisk were included in the meta-analysis and references with two were used for the narrative review of CM principles)

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