Utah Cost of Crime

Mental Health Court (Adults): Technical Report

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THE UNIVERSITY OF UTAH

Utah Criminal Justice Center

COLLEGE OF SOCIAL WORK
COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES
UTAH COMMISSION ON CRIMINAL AND JUVENILE JUSTICE
S.J. QUINNEY COLLEGE OF LAW

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Mental Health Court (Adults): Technical Report

Jennifer K. Molloy, M.S.W.
Christian M. Sarver, M.S.W.
Robert P. Butters, Ph.D.

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Utah Criminal Justice Center, University of Utah

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Mental Health Courts (MHC) are specialized, treatment-oriented courts that divert non-violent, mentally-ill defendants from the criminal justice system into court-monitored, community-based treatment and social services. Lamb, Weinberger, Marsh, and Gross (2007) estimated that more than 300,000 of the 2.1 million prisoners in the United States (U.S.) suffered from a serious mental illness. Given this estimate, criminal justice professionals and policy makers have been under pressure to explore strategies to meet the unique needs of persons with mental illness who have histories of involvement with the justice system and who have not been successfully engaged by community mental health treatment agencies. MHCs emerged in the 1990s with the goal of decreasing the frequency of mentally ill persons' contacts with the criminal justice system by providing courts with resources to improve clients' social functioning, while linking them to employment, housing, treatment, and support services.

As of 2008, the Council of State Governments Justice Center estimated there were 150 operational MHCs in the U.S. with many more in the planning and development phases (Thompson, Osher, & Tomasini-Joshi, 2008). In particular, MHCs have: (1) a separate docket for mentally ill defendants; (2) a dedicated judge for all court hearings and monitoring sessions; (3) dedicated prosecution and defense counsel; (4) collaborative decision making between criminal justice, mental health professionals, and other support systems; (5) voluntary participation in court and treatment by defendants; (6) intensive supervision with ongoing court monitoring and emphasis on accountability; and (7) dismissal of charges or avoidance of incarceration with successful completion of program requirements (Goldkamp & Irons-Guyunn, 2000). A large body of work provides guidelines for the development and implementation of MHCs; however, limited research has been conducted on the impact of MHCs on offenders' criminal behavior.

Prior Research

Research on the effectiveness of MHCs shows promising, but tentative results. The existing research is limited in both quantity and scope. In the sole meta-analysis on MHC, Sarteschi, Vaughn, and Kim (2011) reviewed 18 studies and found that MHCs may be moderately effective at reducing recidivism among mentally ill offenders. When looking only at studies with experimental designs (2 studies) the effect was not significant. The authors cited the overall methodological shortcomings present in the included studies as a limitation of the review. In addition, lack of overall generalizability of the findings was acknowledged. Given the relatively new development of the MHC model, no standardized protocol currently exists to guide implementation. Questions remain on which components of MHCs are associated with reduced recidivism, which offenders are best suited to participate in MHCs, and what external circumstances impact program effectiveness (Almquist & Dodd, 2009). Further empirical data demonstrating MHC's effectiveness is needed to substantiate these promising but cautionary results.

Methods

Inclusion Criteria

A systematic review was conducted, in accordance with the protocol outlined by PRISMA (Moher, Liberati, Tetzlaff, & Altman, 2009), to identify studies for inclusion in this meta-

analysis. The research team identified eligibility criteria for population, intervention, setting, outcome, and methodology (see Methods Report for further explanation of inclusion criteria and search strategies). The search was restricted to studies written in English and conducted between 1987 and 2011. Studies had to meet the following criteria to be eligible:

a) Both the treatment group and the comparison/control group must consist of adult offenders (ages 18 years and older) with an identified mental illness.
b) The study must evaluate a criminal justice intervention. Studies that focused on jail or prison treatments for mentally ill offenders or programs serving non-court involved populations were excluded. A study must evaluate a mental health court program that includes the following elements: comprehensive supervision, treatment services, and immediate sanctions and incentives.
c) The study must include a measure of recidivism—which could be arrest, conviction, or incarceration—as an outcome. Recidivism data from official sources was preferred, but studies using only self-report recidivism measures were also eligible. Non-criminal outcome measures—such as measures of clinical outcomes—were excluded from this analysis. The study must report quantitative results that can be used to calculate an effect size. Given the interest in recidivism, dichotomous data were preferred (e.g., odds-ratios). If the study only included continuous measures, effect sizes were calculated and converted into odds-ratios (Lipsey & Wilson, 2001) using log odds (see Methods Report).
d) Both experimental and quasi-experimental studies were eligible for inclusion. Quasi-experimental studies had to use matching or statistical methods to demonstrate equivalence between the intervention and comparison group. Treatment dropouts were not considered an appropriate comparison group; comparison groups consisting of offenders who refused treatment were included only if the authors conducted analyses that demonstrated that the groups were similar.

Retrieving and Screening Studies

The initial literature search identified 720 citations, from which researchers pulled 42 studies for further evaluation. Full articles were screened by the researchers, which resulted in nine studies that met inclusion criteria. Twenty-percent (20%) of the full articles (k=4) were double-screened for inclusion by a researcher; all disagreements were resolved through discussion between the two researchers. In total, there were nine studies included in the final analysis (see Appendix A).

Extracting Data

The research team developed a detailed code sheet and manual, which included variables related to study quality, program characteristics, participant characteristics, and treatment variables (see Methods Report for a full description of coding variables). One author coded all of the included studies and entered the data into an Excel spreadsheet. Ten percent (10%) of included studies were double-coded (k=1) by a researcher; discrepancies were resolved through discussion. To assess study quality, the research team used a modified version of The Maryland Scale of Scientific Rigor (Aos, Phipps, Barnoski, & Lieb 2001;

Gottfredson, MacKenzie, Reuter, & Bushway, 1997). Studies that received a rating lower than "3" (unmatched comparison group or no comparison group) on a scale of one to five were excluded. Where studies reported multiple measures of recidivism, researchers selected the broadest measure (e.g., arrest over conviction and conviction over incarceration). Outcome data were collected on general recidivism.
Follow-up period was coded according to the length of time during which participants were tracked and also according to whether the measurement period included time during program participation or after program completion. In-program measurement period was defined as one that begins at the onset of program participation, which could be arrest, intake, or program entry. A post-program measurement period is defined as one that begins after mental health court graduation or failure. In many studies, the follow-up period included both in-program and post-program time.

Analysis

Data were coded into an Excel spreadsheet, which allowed researchers to calculate descriptive statistics for the full sample. The research team then recoded variables, to condense data into comparable units wherein each study contributed only one effect size to each outcome measure, and entered those into *Comprehensive Meta-Analysis* (CMA, version 2). Using CMA, the researchers assessed heterogeneity using the *Q* and I-squared statistics (see Results section). The *Q* statistic is a test of the null hypothesis: a significant value ($p>.05$) indicates that the variation between studies was greater than one would expect if the difference could be explained entirely by random error (Borenstein, Hedges, Higgins, & Rothstein, 2009). Because the *Q* statistic is not a precise measure of the magnitude of dispersion between studies, the research team conducted additional analyses to quantify the proportion of variance that could be attributed to differences in study characteristics (e.g., setting, population, intervention). The I-squared statistic (values range from 0% to 100%) provides an estimate of how much of the variation between studies can be explained by random error: values near 0 indicate that all of the difference can be explained by random error. Values at 25%, 50% and 75% are, respectively, considered low, moderate, and large heterogeneity (Piquero & Weisburd, 2010).Given the range of study characteristics present in this sample, a random effects model, which assumes that variability between studies is a product of study level differences (Piquero & Weisburd, 2010), was used to generate a summary effect size for each outcome measure. All data was coded and transformed into odds-ratios, with values above 1 indicating a negative treatment effect and values below 1 indicating a positive treatment effect (i.e. reduced recidivism rates for offenders who participated in treatment).

Results

Sample Characteristics

All of the studies were conducted in the United State. Two studies were unpublished technical reports, conducted by government or private entities, and the remaining studies were published in peer-reviewed journals. Two studies received a five (on a scale of one to five) on study quality and the remaining studies (78%) received a score of three or four. Both the comparison and intervention groups in all included studies consisted of male and female offenders. The follow-up period ranged from six months to two years. All of the

studies included a measure of general recidivism. Total sample size ranged from 44 to 8,237 and the entire sample describes 1,624 offenders in treatment groups and 9,447 offenders in comparison groups (see Appendix B).

Table 1 Characteristics of studies included in meta-analysis (N=9)

Characteristics	Frequency	%
Publication type		
Peer-reviewed journal	7	78
Unpublished technical report	2	22
Sample location		
U.S.	9	100
Canada	-	-
Other	-	-
Methodological Quality		
5: Random Control Trial (RCT)	2	22
4: High quality quasi-experimental[1]	1	11
3: Quasi-experimental with testing or matching	6	67
Dropouts enumerated	5	56

[1]Employs a quasi-experimental research design with a program and matched comparison group, controlling with instrumental variables or Heckman approach to modeling self-selection; May also include RCT with problems in implementation.

Meta-analysis

General recidivism was examined in all nine studies. In six of the studies, results favored treatment (two were statistically significant at $p<0.05$). The odds-ratios for general recidivism ranged from 0.13 to 1.23. The random effects mean odds-ratio was 0.60 (95% CI of 0.32 to 1.13, p=0.11), indicating a positive, but not significant, impact of the intervention (see Appendix C). The *Q* test showed that the distribution of the effect sizes was significantly heterogeneous (Q=137.09, df=8, $p<0.01$, I^2 =94.16), which means that the studies did not share a common effect size. This finding was expected and limits the overall generalizability of findings given the variability in MHC models represented in the included studies. Following the omnibus meta-analysis, studies were grouped by follow-up period for further moderator analysis.

General recidivism by follow-up period. In-program measurement of recidivism was the most common outcome (6 studies) and included both time in-program and post-program. The random effects mean odds-ratio was 0.62 (95% CI 0.26 to 1.49, p=0.29) indicating a non-significant result for the intervention. The Q test revealed significant heterogeneity ($p<0.001$). A post-program measurement period was reported in three studies. The random effects mean odds-ratio was 0.68 (95% CI 0.50 to 0.92, p=0.01) indicating a significant reduction in recidivism for the intervention group and possible long-term effects on criminal behavior. The Q test revealed significant heterogeneity (p=0.56). The between-groups Q test was not significant (Q =0.04, df=1, p=0 .85),

suggesting that there is no statistical difference in the effect of MHC court on in-program and post-program recidivism.

Limitations

Any meta-analysis is only as good as the comprehensiveness of the sample of included studies. While the research team sought to identify all eligible studies, the possibility exists, nonetheless, that the search did not identify all the extant outcome research on adult Mental Health Courts. In some cases, the researchers identified studies that appeared to meet inclusion criteria, but were unable to obtain those studies, despite extensive searching. Furthermore, the results of a meta-analysis depend on the quantity and quality of the available primary research. The results reflected here are dependent on an analysis of less than ten studies. The small sample size increases the chance that the lack of findings of significant treatment effect is based on limited statistical power rather than true treatment effects. Finally, the studies included here reflect significant heterogeneity in terms of offenders, settings, dosage, study quality, and outcome measures. While the researchers created narrow inclusion criteria to account for study-level differences, future research should examine those study characteristics in moderator analyses, to identify specific treatment characteristics that are associated with the biggest treatment effects.

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Included Studies

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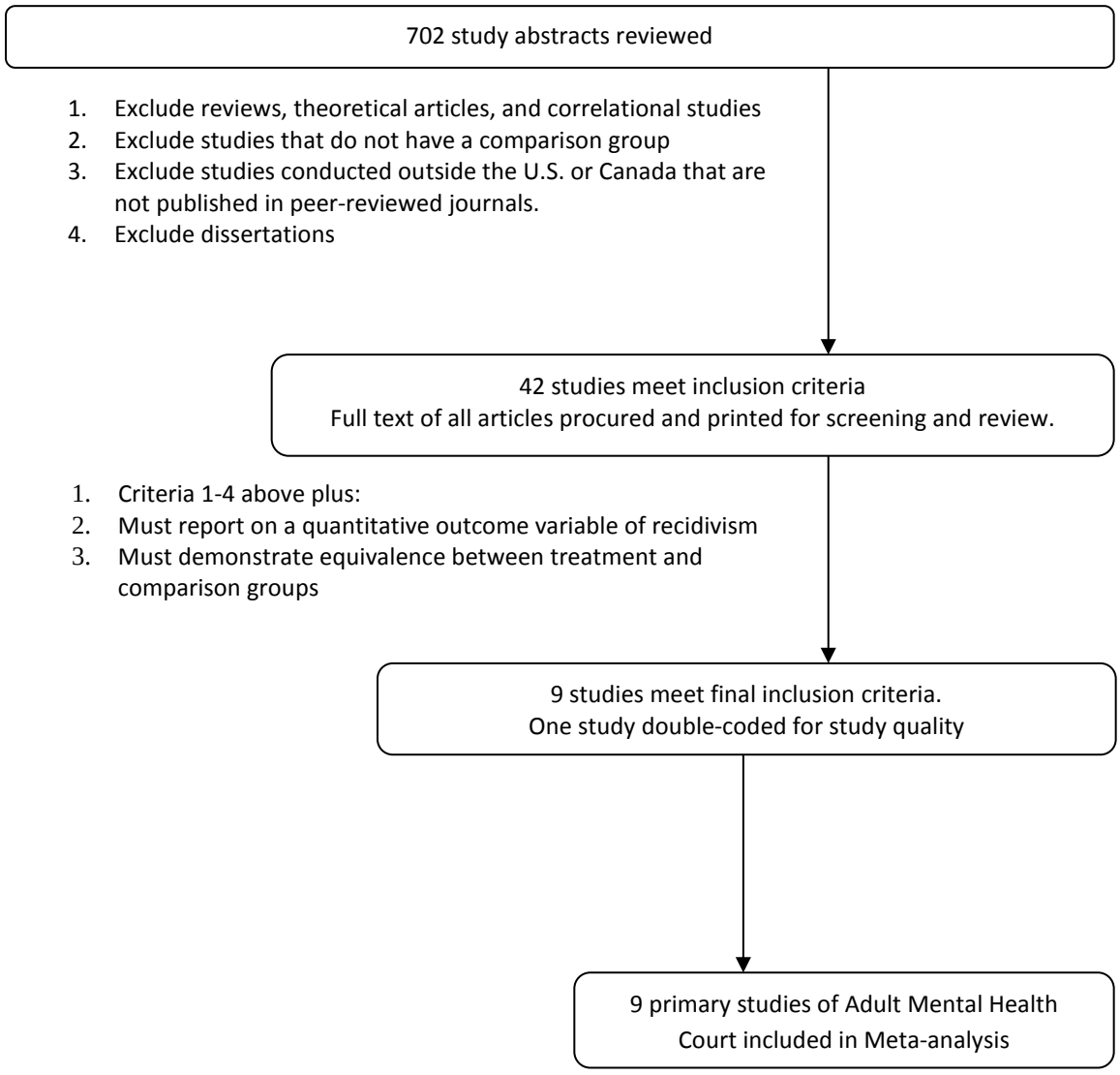
APPENDIX A: Search Results

Search: Title and Abstract
Search Limiters: Date Range
(1987-2011), English



APPENDIX B: Table of Included Studies

Author	Date	N in Each Group		Study Design	General Recidivism	
		Treatment	Control		Odds-ratio	95% CI
Bess	2004	18	26	Random	0.33	0.09, 1.29
Christy et al.	2005	116	101	Match	0.70	0.41, 1.19
Cosden et al.	2003	85	65	Random	1.23	0.59, 2.57
Cosden et al.	2005	137	98	Random	1.23	0.53, 2.84
Dirks-Linhorst & Linhorst	2012	351	89	Convenience with testing	0.69	0.39, 1.21
Ferguson et al.	2008	218	218	Matched	0.72	0.49, 1.05
McNiel & Binder	2007	170	8,067	Matched	0.13	0.10, 0.18
Moore & Hiday	2006	82	183	Convenience with testing	0.47	0.28, 0.80
Steadman et al.	2011	477	600	Matched	0.97	0.78, 1.22
Total Sample = 11,071						