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A Booster Intervention in a Connecticut Correctional Institution: A Pilot Study

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Annette T. Maruca, PhD

University of Connecticut, 2014

Abstract

The issue of offender reentry remains one of the most important and critical social problems that America is facing. There is continued interest and support on a state and national level to promote successful reentry and to improve public safety. It is important to implement evidence-based treatment programs that will achieve this goal. Research also shows that treatment gains from interventions diminish over time when the benefit of the program fades.

This purpose of this dissertation is to explore if a booster treatment intervention would be effective to reinforce treatment gains for incarcerated persons with mental illness who are preparing to be released back to the community. To achieve the purpose of this dissertation, three chapters are presented as articles. The first article, a systematic review, did show that treatment interventions for offenders with mental illness were cautiously effective in reducing mental health symptoms and in reducing recidivism. The results of this systematic review of meta-analyses revealed that a booster intervention in the correctional institution had never been implemented or examined with this population. Based on this literature review, the many challenges and barriers to conducting research in the correctional setting were identified that became the topic addressed in the second article. Several correctional nurse researchers disseminated the challenges they encountered in their research and offered recommendations to bridge the barriers identified. This pilot study did implement some of the recommendations, however, obstacles persisted. Based on this pilot study, future refinements on persistent barriers

and recommendations are made. The third article describes the theoretical framework underpinning this study, the research design, the intervention, methodology and the results of the pilot study. The final chapter is the conclusion that synthesizes the findings of all three articles with a recommendation for future research with booster treatment interventions with the correctional population to reinforce self-care behaviors and mental health management not only while in the correctional institution but also after release.

A Booster Intervention in a Connecticut Correctional Institution: A Pilot Study

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APPROVAL PAGE

Doctor of Philosophy Dissertation

A Booster Intervention in a Connecticut Correctional Institution: A Pilot Study

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Dedication

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Chapter One: Introduction

The focus of this research study was to investigate the effectiveness of a booster treatment intervention or a shortened version of an intensive 32-session primary treatment intervention for offenders in a Connecticut Correctional Institution who were preparing to return to the community. This study addressed the exploration of two health related outcome variables: (1) self-care behaviors, and (2) mental health and substance abuse symptom maintenance. This chapter begins with providing background information about offender reentry process and the significance of reentry programs. Also, it describes the statement of the research problem, gaps in the literature, research purpose and question, definition of terms, and concludes with the significance of the study to nursing.

Background of Prisoner Reentry

The issue of offender reentry remains one of the most important and critical social problems that America is facing. With the mass incarcerations that have occurred in recent decades and the large numbers of offenders being released to the community annually (Mears & Mestre, 2012), the release of offenders from prison is not a new phenomenon, although there has been an increase interest in factors that support successful prisoner reentry. This renewed interest in offender reentry is due to many changes that surround offender release and their reentry into the community.

The United States prison population exploded eight-fold between 1970 and 2005 and was reported by the Pew Charitable Trusts to continue to grow by an additional 192,000 convicts by year 2011. This report also notes that one in 178 United States residents would be in prison by 2011 and the increase could cost American taxpayers another 27.5 billion dollars over the next

five years in prison spending. These predictions led lawmakers to consider what was working in prisons and what wasn't working in order to reduce recidivism, decrease prison cost and protect public safety (Lawrence, 2010). As a result there have been record numbers of offenders being released early from prison due to budget cuts (Binswanger et al 2011; Pew Charitable Trusts, 2010; Wodahl, 2006), changes in sentencing practices (Petersilia, 2001, 2004), and closing of prison facilities all of which has drawn attention to prison reentry.

The Pew Charitable Trusts noted that the United States prison population declined from 2009 to 2011 after nearly four decades of explosive growth, according to the Justice Department (Carson & Sabol, 2012). According to the Criminal Justice Policy and Planning Division and the Office of Policy and Management (February 15, 2012), the total prison population in Connecticut was 17,022 with an anticipated drop by 2.6% in January 2013. This decline in the size of Connecticut's prison population is at its lowest in the last decade (Phaneuf, 2011). Governor Dannel P. Malloy's administration has supported several policy changes such as the Early Prison Release plan passed in 2011, the closing of several Connecticut prisons and diverting the number of individuals who are struggling with mental illness or drug addiction from being incarcerated – measures implemented to control the size of offender population, to control prison costs and to reduce recidivism.

This topic is receiving significant and worthwhile attention with strides towards reducing the numbers incarcerated since the passing of the Second Chance Act. In 2004 in his State of the Union address then, President George W. Bush proposed a \$340 million prisoner reentry initiative that “would represent a significant infusion of resources into reentry programs” (O’Hear, 2007, p. 75). George W. Bush stated in his address that, “We know from long experience that if [offenders] can't find work, a home or help, they are much more likely to

commit crime and return to prison...America is the land of second chance, and when the gates of prison open, the path ahead should lead to a better life” (President George W. Bush, State of the Union address 2004, p. 8). The Second Chance Act (P.L. 110-199) became law in April 9, 2008 and was designed to improve outcomes for people returning to communities from prisons and jails. This legislation authorized federal grants to government agencies and nonprofit organizations to provide employment assistance, substance abuse treatment, assistance with housing, family programming, mentoring, victim support, and other services that would help reduce recidivism and improve the quality of life of a person leaving prison.

O’Hear (2007) cautions that framing and evaluating the reentry initiatives solely by reduction in recidivism would not recognize all the factors involved in enhancing successful reentry. This author encourages that there is consideration of social and economic welfare in the evaluation of successful reentry initiatives recognizing that no rehabilitative program will ever completely eliminate recidivism. There are other outcome measures that reentry programs strive to improve such as attending treatment programs, sustaining sobriety, maintaining mental health symptoms, engaging in employment, contributing to family life and participating in community activities (Mears & Mestre, 2012; Petersilia, 2004; Visher & Travis, 2003). Consideration of the factors previously mentioned is all noteworthy outcome measures of successful reentry programs.

On November 13, 2013 there was a gathering of Senators, Congressmen and advocates to acknowledge the five-year anniversary of the Second Chance Act and to show support for the continuation of funding for this act. This group of individuals introduced a new bill – the Second Chance Reauthorization Act of 2013 that proposes to continue to support state and local grant programs that promote successful prisoner reentry and that improve public safety. The bill also

authorizes separate grants that are designed to ensure that current and new programs utilize evidence-based practices that are most likely to result in reduced recidivism and other improved outcomes.

Problem

Transitional Issues

The transition from prison to the community is often perceived as a positive change. Nonetheless, transitions can be “disruptive and the outcome uncertain” for many released offenders (Kinner, 2006; Shelton, Anderson & Barta, 2010; van Doren, Richards, Lenno & Kinner, 2013). Released offenders leave a highly regulated and controlled environment where following the rules and regulations are an expectation. Clemmer (1940) examined how the prison culture and the process of offender socialization in prisons can have untoward effects on offenders. As a result of his research, he identified that every prisoner goes through some degree of socialization into the prison culture related to the various deprivations the offender experiences related to their confinement. He labeled this adaptive process of institutionalization by which offenders are socialized to the prison culture as “prisonization” (p. 270). As a result of prisonization, the released offenders tend to face more difficulty and problematic transitions as they readjust to life in the community. This transition or reintegration often requires that offenders rediscover self-care skills, coping skills and problem solving skills that are necessary for successful adjustment to community living (Haney, 2001; Shelton et al, 2010).

Offenders face many challenges as they prepare to transition from incarceration to community living (Mears & Mestre, 2012; Petersilia, 2003). Many factors can affect offender’s reentry and successful reintegration to the community including but not limited to: lack of education and skills or training for employment (Petersilia, 2004; Lawrence, 2010; Wodahl,

2006), presence of or lack of support from family and friends (Bahr, Harris & Fisher, 2011), challenge of obtaining mental illness and substance abuse treatment (Baillargeon, Hoge & Penn, 2010; Drain, Wolff, Jacoby, Hartwell & Duclos, 2005; Wodahl, 2006), homelessness (Baillargeon, Hoge & Penn, 2010; Roman & Travis, 2006; Solomon et al, 2004; Wodahl, 2006), the stigma from a prison record or the dual stigma of a prison record and mental illness/substance abuse (Hartwell, 2004). Many offenders, if not most, will experience some form of social and psychological stressors after release or heightened emotionality associated to the process of reentry and reintegration to community living (Shinkfield & Graffam, 2009, 2010). Transitional services are vital in securing successful reintegration into community living and ideally begin when a person is incarcerated. Services that provide support in reconnecting offenders to positive and productive activities in their communities are an important part of the reentry process.

Mental Health and Substance Abuse Issues

The number of offenders with mental illness or substance abuse problems involved in the criminal justice system and residing in prisons continues to grow (Baillargeon, Hoge, & Penn, 2010; Draine, Wolff, Jacoby, Hartwell, & Duclos, 2005; Hartwell, 2004; Lurigio, Rollins and Fallon, 2004; Yurkovich & Smyer, 2000). A Bureau of Justice Statistics indicates that half of all prison and jail inmates had mental health problems, nearly 63% of those with mental health problems used drugs and female inmates had higher rates of mental health problems than male inmates (James & Glaze, 2006). This translates to one in every five offenders in Connecticut is receiving mental health treatment contributing to a rise in offender mental health costs to the criminal justice system.

According to Baillargeon et al (2009), there have been “a number of legal, social and political factors, over 40 years that have led to the current epidemic of psychiatric disorders in

the U.S. prison system” (p. 103). The most fundamental factor, related to a change in mental health policy, led to a shift of mental health treatment from institutional settings to the community. The average length of stay in psychiatric hospitals greatly diminished and individuals were being discharged to community based mental health services in a much shorter time period. The deinstitutionalization movement occurred before there were insufficient numbers of available community health programs to accommodate the numbers of patients leaving psychiatric facilities (Baillargeon, Hoge & Penn, 2010; Lurigio et al, 2004; Kesten, Leavitt Smith, Shelton, Zhang, & Trestman, 2012). Individuals with mental health problems were in the community without adequate support, demonstrated less tolerated behaviors in the community and had increased interface with community police. This set off the community policing programming. The result of this poorly implemented process led to more mentally ill persons finding themselves involved in the criminal justice system related to poorly managed mental health problems with an increase use of alcohol and drugs (p. 46). Fragmentation of services, changes in health care policy and drug enforcements all compounded the problem of the large numbers of offenders who need treatment for mental illness and substance abuse. Court decisions that placed restrictions on the criteria and procedures for civil commitment meant that unless an individual was clearly proven to be a danger to themselves and/or others or so gravely disabled the individual could not be committed to an institution for treatment. More individuals with mental illness or substance abuse were dwelling in the community with limited access to treatment and who were unable to care for themselves (Baillargeon, Hoge & Penn, 2010; Baillargeon, Binswanger, Penn, Williams & Murray, 2009). The “war on drugs” also led to an increase in the numbers of arrests with an emphasis on fixed sentencing. Individuals with mental

illness often have co-occurring substance abuse and this policy often resulted with these individuals in prison or jail culminating in “a revolving door phenomenon” (p. 103).

Gap in Knowledge

Current and former offenders with mental illness and substance abuse problems represent a substantial underserved population. Despite the increased focus of attention on reentry of offenders to the community, these offenders do not receive adequate attention to ensure treatment gains during incarceration to support their successful reintegration back into community life. A well designed and implemented reentry program that assists offenders in practicing newly acquired skills and behaviors and that builds upon earlier treatment prior to release designed to support their return to the community has not been examined. The type of program that was pilot tested to address the challenge of community reentry for offenders with mental illness is a “booster” psycho-educational program.

Purpose of the Study

A pilot study was conducted to evaluate the implementation of a 4-session booster treatment intervention at a Connecticut Department of Corrections (CDOC) female prison in collaboration with CDOC, University of Connecticut Health Center (CMHC) and University of Connecticut School of Nursing. The purpose of this study was to evaluate the effectiveness a 4-sessions booster treatment intervention a Connecticut Department of Correction’s prison (see Appendix A for curricular outline). Outcome measures that will be examined include self-care skills and mental health symptoms.

This pilot study examined the benefits of a brief booster intervention as a modification of the primary treatment program offered to female offenders in Connecticut Department of Corrections (CDOC). The booster intervention was offered to offenders who have had exposure

to the primary START NOW program and who were preparing for release or near the end of sentence. The aim of the booster sessions was to reinforce treatment gains by improving self-care behaviors and maintaining mental health symptoms as part of offender's transition back to the community life.

Health care programs have been shown to be beneficial but treatment gains can diminish over time. Research shows that booster programs can be important in maintaining treatment gains achieved during the initial treatment program as well as enhancing initial treatment effect (Bundy, McWhirter & McWhirter, 2011; Mangels, Schwarz, Warringen, Holmes & Reif, 2009; Tolan, Gorman-Smith, & Schoenry, 2009). Booster sessions have been investigated in a wide range of treatment interventions to determine their effectiveness such as assertiveness training (Baggs & Spence, 1990), motivational interviewing (Scott et al. 2011; Sussman, Sun, Rohrback & Spruijt-Metz, 2012), and cognitive training (Baker & Wilson, 1985).

Booster sessions have been used to evaluate training programs in education. Tolan et al. (2009) designed a randomized control trial study to examine whether additional sessions of a Student Created Aggression Replacement Education (SCARE) program would enhance the effects of the original program on three risk factors for antisocial behavior with adolescents. The results of this study suggested that boosters provided an additive benefit on the maintenance of the original intervention. In a second study by Bundy et al. (2011), these authors also used the SCARE program as a booster intervention to examine the effectiveness of a booster on antisocial behavior with adolescents. Results of Bundy et al.'s study with adolescents revealed a significant improvement in intervention group pretest- posttest scores outcome measures compared to treatment as usual group.

Although these studies did not involve a correctional population they did show promising results of a booster intervention in maintaining and increasing the treatment effects for the original 15-session program. Studies that looked at booster intervention programs as a means of strengthening desired treatment gains can vary on the frequency, medium, numbers and duration of sessions. These studies suggest that booster programs can be beneficial in realizing at least maintenance of treatment gains and in most cases an increase in effect of the original treatment.

Significance and Relevance to Nursing

This pilot study is unique and adds to the current criminal justice and mental health nursing literature because there are no studies on booster treatment interventions that have been implemented or evaluated in correctional institutions with offender population who have mental illness who are reentering the community. It is apparent that it is of utmost importance to offer soon to be released offender's opportunities that support community adjustment. Second, correctional nurses are known to be primary providers of group interventions in correctional settings and a booster intervention is another form as a group therapy that correctional nurses can facilitate, it is a brief intervention and can help offenders with mental illness prepare to return to their respective community (Maruca & Shelton, 2014). Third, this pilot study demonstrates that a booster treatment intervention is effective in improving offenders' confidence in self-care behaviors while maintaining mental health symptoms.

Theoretical Framework

The Rediscovery of Self-Care: A Care Model for Persons with Incarceration Experience (RSC model), is based on the belief that individuals who enter the prison environment experience a loss of self-care practices related to prisonization that manifests as dependency, loss of adaptive coping skills and problem solving skills (Shelton, Barta, & Anderson, 2010).

Identifying factors or activities that will promote self-care skills and self-managed regulation while incarcerated and transition these skills in released offenders is important to promote successful community reintegration.

This RSC model is useful to help frame the research question to explore the effectiveness of the booster treatment intervention designed to promote the rediscovering and reinforcing of self-care skills and coping skills aimed to enhance the physical and psychological health of released offender's during community reentry. The RSC model is based on the beliefs that offenders enter this prison system with strengths and resources for their own empowerment; however, through the process of incarceration or repeated incarcerations, offenders learn to adapt to the prison environment resulting in a dependency upon the prison system. This model offers an approach to assess changes in released offender's practice of self-care related to treatment intervention (Figure 1).

The definition of self-care for the RSC model comes from Orem's theory of self-care deficit. Orem defines self-care as: "the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health and well-being" (in Melnyk, 1982, p. 172). Orem's general theory of self-care deficit is comprised of three constituent theories: 1) theory of self-care – how and why people care for themselves, 2) theory of self-care deficit – how and why people can be helped through nursing, and 3) theory of nursing systems – actions designed and performed by nursing to assist individuals to compensate for or overcome an existing or emergent self-care deficit (Allison, 2007; Denyes, Orem & SozWiss, 2001; Orem & Taylor, 2011; and Tomey & Aligood, 2006). The theory of nursing systems subsumes the theory of self-care and theory of self-care deficit (Orem & Taylor, 2011, p. 38). Orem's theory proposes that self-care consists of deliberate actions performed by individuals or are performed for individuals

on a continuous basis necessary for physical, mental and social functioning for the purpose of promoting life, health and well-being (Allison, 2007, p. 68; Tomey & Aligood, 2006, p. 269).

Following Orem, key areas in the RSC model include: a) loss of integrated function as a result illness, injury or major life event, b) the process of restoring and maintaining integrated function, and c) recognition that self-care behavior is hindered or supported by environmental factors (Shelton et al, 2010). Self-care is a learned behavior that is acted upon by the individual for the purpose of achieving a desired outcome. The transition from prison to community places a new demand on the released offender for self-care skills.

The RSC model is based on the belief that offenders have the capacity for self-care and can benefit from interventions that promote the rediscovery of these skills once released from prison. The booster treatment intervention combines cognitive-behavioral skills and motivational interviewing skills in a training program that will reinforce personal responsibility for behaviors, provide training skills to teach connections between thoughts, feelings and behaviors and teach soon to be released offenders to recognize past ineffective coping skills and replace with new effective coping skills they learned to use in stressful situations.

The benefits of a booster intervention include: (1) promoting engagement and adherence to mental health care treatment during incarceration and after release; (2) providing an opportunity for soon to be released offenders to practice and reinforce behaviors that promote positive consequences (enhance self-care behaviors and manage mental health symptoms); (3) supporting self efficacy by boosting perceived confidence in their coping skills (re-skilling); and (4) t establishing reachable short-term and long-term goals (goal-orientation). These benefits will help to manage mental health symptoms that can interfere with self-care.

Research Question and Hypothesis

The START NOW program is an evidence-informed coping skills treatment intervention with a motivational interviewing and cognitive-behavioral focus designed by Dr. Susan Sampl, Dr. Robert L. Trestman and Jane Harrison L.C.S.W. of University of Connecticut's Correctional Managed Health Care (UConn Health Center CMHC) to treat offenders with behavioral disorders. The START NOW program is currently rendered in the Connecticut Department of Correction female facility as an intervention offered to offenders in four main units that total 32-sessions.

The research question is: *“What is the effect of the booster intervention on self-care behaviors (as measured by SUPPH total scores) and mental health status (as measured by Basis-24 total scores) for offenders who participated in the START NOW program?”*

The hypothesis is: *The participants will show improved self-care behaviors (increase in total SUPPH scores) and improved mental health status (decrease in total BASIS-24 scores) after the booster intervention.*

The assumption is that participants who receive the booster treatment intervention will benefit from the four group sessions by fortifying skills and continuing treatment gains learned during the primary START NOW program. As such, the booster intervention can be invaluable for offenders prior to their release into the community where self-care skills and improved mental health status are crucial for successful reentry.

Research has shown that a cognitive-behavioral intervention approach has been most effective with offenders during incarceration and has a positive effect on reducing recidivism (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Clark, 2010; Khodayarifard, Yekta, & Hamot, 2010; Landenberger & Lipsey, 2005, Lipsey, Chapman, & Landenberger, 2001;

Lipsey, Landenberger, Wilson, 2007; and Wilson, Bouffard, & Mackenzie, 2005). Petersilia (2004) reviewed the extensive literature in criminology, sociology and psychology on prison reentry in an effort to make some sense of what works for this process. She concluded that reentry programs that focused on high-risk individuals and that used a cognitive-behavioral treatment (CBT) technique were most effective. High-risk individuals in prison can include those with mental health and substance abuse problems. Also developing skills such as problem solving to enhance engagement with community treatment is advantageous for those who have grown dependent upon the prison institution (Draine & Herman, 2007).

Definition of terms

State Prisons

State prisons are run by state correctional authorities with given legal authority and house prisoners generally serving a term of more than one year (BJS, 2006)

Prisoners/Offenders

Prisoners/offenders are inmates confined in long-term facilities run by the state or federal government or private agencies. They are typically felons who have received a sentence of incarceration of one year or more. (Prison sentence length may vary by state because a few states have one integrated prison system in which both prison and jail inmates are confined in the same types of facilities).

Mentally ill offenders

Mental health problems are defined as symptoms of a mental health or substance abuse problem based on criteria specified in the Diagnostic Statistical Manual IV-TR.

Reentry programs

Reentry programs as those that: “(1) specifically focus on the transition from prison to community, or (2) initiate treatment in a prison setting and link with a community program to provide continuity of care” (Petersilia, 2004, p. 5).

Summary

These formidable challenges to offender reentry from prison can be a daunting process for soon to be released offenders and the Department of Corrections, especially those individuals with mental illness or substance abuse problems. If offenders are to successfully make the transition from prison to community living, it is incumbent upon correctional institutes and community-based centers to examine what promotes successful prisoner reentry (Baillargeon, Hoge & Penn, 2010; Baillargeon, Binswanger, Penn, Williams & Murray, 2009; O’Hear, 2007; Lawrence, 2010; Petersilia, 2004).

The aim of most correctional programs is to reduce recidivism when offenders are released from prison, yet this is not the only indicator of success for correctional-based treatment intervention. For offenders with mental illness, symptom management, self-care behaviors, significant relationships and psychosocial well-being are all important outcomes to consider and can ultimately reduce the likelihood of continued criminal behavior (Staton-Tindall et al., 2011; Tripodi, Bledsoe, Kim & Bender, 2011). This pilot study examined a booster treatment intervention that reinforces skills to enhance self-care behaviors, relationships, psychosocial wellbeing and management of mental health symptoms. A booster intervention that promotes skills training and psychosocial wellbeing is beneficial in successful transition to community life.

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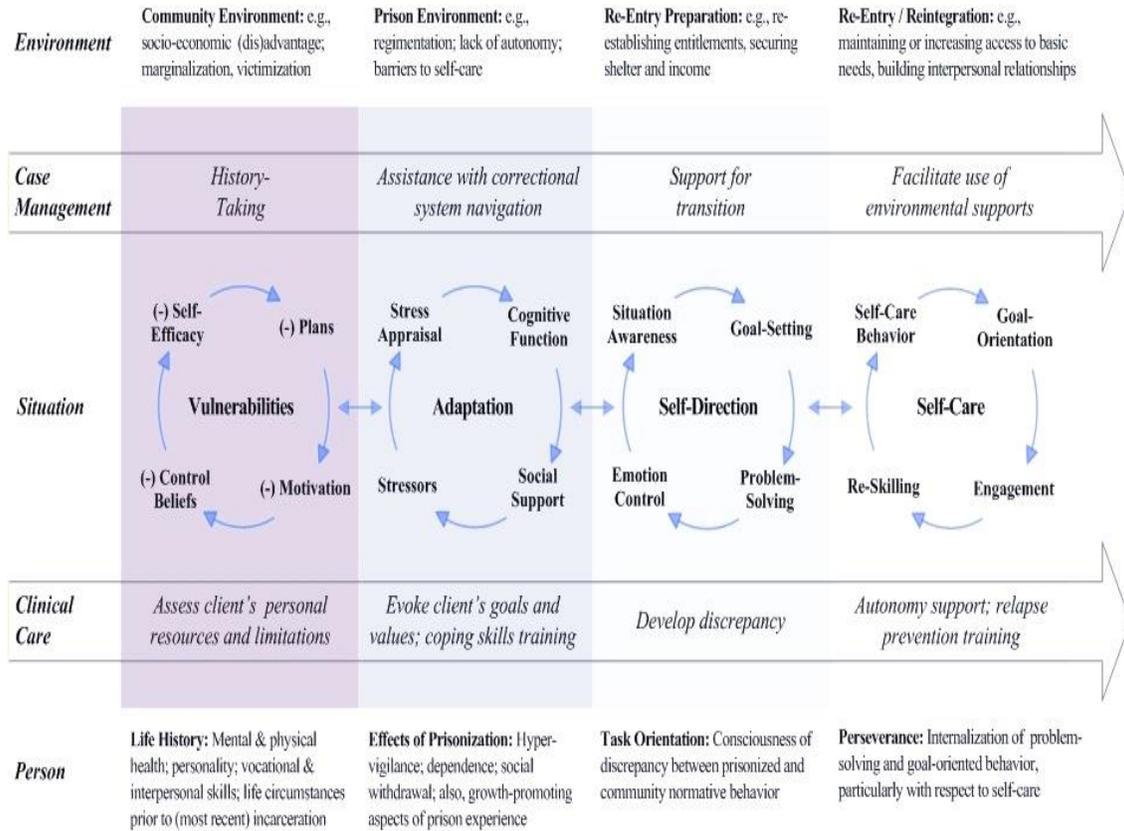
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Figure 1: Rediscovery of Self-Care Model

Rediscovery of Self-Care: A Care Model for Persons with Incarceration Experience



Chapter Two: Article 1

A Literature Review of Treatment Programs for Offenders with Mental Illness: Proposing a
Booster Intervention Treatment

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Abstract

The purpose of this study is to report on the current and existing evidence regarding treatment programs for offenders with mental illness. The aims of this review are to evaluate and to report on the existing literature of treatment programs for offenders with mental illness in the reentry process and to add to the literature on this topic by making a case for a booster intervention with soon to be released offenders with mental illness in the correctional population. Results suggest there are some treatment interventions for offenders with mental illness that are effective in reducing mental health symptoms and criminal justice behaviors. Based on the review of three systematic reviews and the current literature on this topic, the evidence cautiously suggests that interventions for offenders with mental illness are moderately effective. This review also highlights the need for continued research on this topic to better describe and characterize the interventions that are most effective for offenders with mental illness. The authors conclude the review by proposing a booster intervention for offenders with mental illness as a means to reinforce treatment gains, strengthen self-care skills and manage mental health symptoms.

Keywords: offender reentry, correctional institutions, offenders, treatment programs, mental illness, booster programs

A Literature Review of Treatment Programs for Offenders with Mental Illness: Proposing a Booster Intervention Treatment

The population of offenders with mental illness and substance abuse in the United States has been increasing and is a growing concern over the past two decades (Baillargeon et al, 2009, 2010; Baillargeon, Hoge, & Penn, 2010; Bewley & Morgan, 2011; Draine, Wolff, Jacoby, Hartwell, & Duclos, 2005; Hartwell, 2004; Lurigio, Rollins and Fallon, 2004; Yurkovich & Smyer, 2000). Accurate prevalence rates of mentally ill offenders is difficult to gauge and can depend on the report referenced. The Bureau of Justice Statistics (September, 2006) which is the national source on offenders with mental health problems, found that more than half of all prison and jail inmates (56% of state offenders, 45% of federal offenders and 64% of local jail offenders) have mental health problems (James & Glaze, 2006). The James and Glaze (2006) survey defined mental health problems by two measures: (1) a recent history of mental health problems and (2) having symptoms of a mental health problem (p.10). This same study found that offenders (state prison = 74%, federal prison = 64% and local jail = 76%) with mental health problems also had the highest rate of dependence or abuse of alcohol or drugs as defined by the Diagnostic Statistical Manual-IV (DSM-IV). Mental illness for offenders with co-occurring substance abuse is often associated with relapse, homelessness, familial problems, functional problems, and medication non-adherence (Chandler & Spicer, 2006).

According to the United States Bureau of Justice Department, the total prison population in the United States in 2012, declined for the third straight year, from 1,599,000 at yearend 2011 to 1,570,400 at yearend 2012 (Carson & Golinelli, *BJS*, December 2013). This decline in the total prison population was related to the number of releases from prison that far exceeded the number of admissions for the first time in three decades (Carson & Golinelli, 2013; Draine &

Herman, 2007; Draine, Wolff & Jacoby, 2005). The large number of offenders being released back into the community has led to a need to prepare for and provide for the necessary services that this underserved population will need upon release and reintegration into their respective communities. The re-entry process is integral in helping an offender successfully transition back into their community and programs that support this transition are helpful to avert criminal behaviors or mental health decline that can lead to re-incarceration. *Reentry* is a term used to describe the treatment programs and services for offenders who are being released from prison or jail to help and assist with the many challenges individuals face during this transition (Wheeler & Patterson, 2008, p. 145). Petersilia (2004) defined reentry programs as those that: “(1) specifically focus on the transition from prison to community, or (2) initiate treatment in a prison setting and link with a community program to provide continuity of care” (p. 5).

Offenders face many challenges as they prepare to transition from incarceration to the community. Many offenders, if not most, will experience some form of social and psychological stressors after release or heightened emotionality associated with the process of reentry and reintegration to community living (Shinkfield & Graffam, 2009, 2010). Factors that can affect an offender’s reentry and successful reintegration to the community include but are not limited to: lack of education and skills or training for employment (Petersilia, 2004; Lawrence, 2010; Wodahl, 2006), presence of or lack of support from family and friends (Bahr, Harris & Fisher, 2011), challenge of obtaining mental illness and substance abuse treatment (Baillargeon, Hoge & Penn, 2010; Drain, Wolff, Jacoby, Hartwell & Duclos, 2005; Wodahl, 2006), homelessness (Baillargeon, Hoge & Penn, 2010; Roman & Travis, 2006; Solomon et al, 2004, Wodahl, 2006), and the dual stigma from having a prison record and a diagnosis of mental illness/substance abuse (Hartwell, 2004).

While the precise estimate of the numbers of offenders in the correctional system may vary, it is well acknowledged that offenders with mental health and substance abuse issues are overrepresented in correctional institutions. As a result, the correctional system and criminal justice system is giving much attention to the needs of and the provision for the mental health care needs for this population (Bewley & Morgan, 2011; Brandt, 2012; James & Glaze, 2006; Draine & Herman, 2007; Ruddell, 2006; Steadman, Osher, Robbins, Case & Samuels, 2009). A review of the literature by Watson, Stimpson, and Hostick (2004) that focused on prison health care in general revealed the main issues in prison health care relate to mental health, substance abuse and communicable diseases (p. 119). Correctional institutions recognize the need for treatment programs that also promote health, particularly mental health, as an essential component in the overall care of offenders if offenders are to be rehabilitated and returned to the community.

Importance of Treatment Interventions

It is known that treatment interventions are essential in supporting psychosocial skills, promoting health, and in successful reintegration to community living. However, to make adequate decisions on the interventions most beneficial to offenders with mental illness, it is important to know what types of treatment programs currently occur in correctional settings for offenders with mental illness and are they effective as far as managing mental health symptoms. It is the author's interest to also explore if there are any booster interventions that are currently offered or have been implemented and evaluated in the correctional setting with offenders with mental illness. Based upon previous literature reviews, there have not been any studies done with this population concerning this type of treatment intervention.

Research Questions

The aims of this review are twofold: (1) to evaluate and report the existing literature on treatment programs for offenders with mental illness in the reentry process, and (2) to add to the literature on this topic by making a case for a booster intervention with soon to be released offenders with mental illness in the correctional population. The research questions are:

RQ1: “What are the types of treatment interventions used for offenders with mental illness who are preparing for reentry, and are they effective?”

RQ2: “Are there any booster treatment interventions used for offenders with mental illness as part of the reentry process?”

Search Strategy

The search strategy was conducted using electronic databases that included Cumulative Index of Nursing and Allied Health Literature plus text (CINAHL Information Systems, Glendale, CA), PubMed (U.S. National Institutes of Health, Bethesda, MD), and PsycINFO (American Psychological Association, Washington, D.C.). The following keywords were used, either separately or in combination during the search: (‘offender’, ‘incarceration’, ‘prison’), AND (‘mental health’, ‘mental illness’, ‘mentally ill’, ‘mental disorders’, ‘substance abuse’), AND (‘ programs’, ‘treatment programs’, ‘transitional programs’, booster programs’), AND (‘reentry’, ‘re-entry’, ‘reintegration’, and ‘return to community’). The search strategy also looked at government reports related to this topic although grey literature was not fully explored.

Inclusion/Exclusion Criteria

Inclusion and exclusion criteria for study selection are listed below. Studies needed to be written in English and published from January 2004 through January 2014 for consideration of inclusion in this review. The last search was done in February, 2014.

Inclusion criteria:

- Population is adult offenders (18 years or older)
- Evaluate a treatment intervention in correctional institution (prison, jail, forensic psychiatric hospital)
- Reentry focus for offenders with mental illness (as defined by DSM IV-TR including substance abuse)
- Outcomes are mental health outcomes (can also include criminal justice outcomes)
- Types of literature: journal articles, surveys, theses, dissertations, government reports
- Publications can include countries outside United States

Exclusion criteria:

- Juvenile, detainee or parolee populations
- Does not evaluate a treatment intervention
- Treatment intervention is in the community
- Focus is not on offenders with mental illness or not on reentry issues
- Outcomes do not include mental health outcomes or **only** includes criminal justice outcomes
- Types of literature: posters or symposiums, books, commentaries, editorial letters, non-peer reviewed journals

Search Outcomes

Using the search terms listed above, 700 articles were found from using keyword searches. The search strategy was exploded to include: all of the narrower terms under headings, to include articles published in English and that were published within the last 10 years (2004 – 2014). This strategy led to 216 articles. A preliminary appraisal based on title and abstracts resulted in exclusion of 129 articles and yielded 87 articles appropriate for more in-depth review. Removing the 23 duplicates, 64 articles remained for in-depth review based on study criteria. Upon further review, it was determined that 56 articles did not meet the inclusion criteria for reasons such as not evaluating an intervention ($n = 21$), the population did not meet criteria ($n = 7$), intervention was in the community setting ($n = 11$), did not have mental health outcomes ($n = 14$), or the article was an editorial letter ($n = 3$). Of the eight articles that met the inclusion criteria, one was a descriptive study, one was a qualitative study, two were randomized control

trial, one was a quasi-experimental design, and three were comprehensive systematic reviews conducted on interventions for offenders with mental illness. Given that the three comprehensive systematic reviews were current and addressed the same questions of inquiry, the decision was made to appraise the quality and outcomes of these systematic reviews. Of the three systematic reviews, Fontanarosa, Uhl, Oyesanmi, & Schoelles (2013) is a government report by the Agency for Healthcare Research and Quality (AHRQ) and both Martin, Dorken, Wamboldt, & Wootten (2011) and Morgan, Flora, Kroner, Mills, Varghese, & Steffan (2011) were meta-analyses (Figure 1). The resulting decision was to review and evaluate all three systematic reviews.

Method

Data Extraction

After the search and retrieval process, the following data were extracted from the three articles that included: author, year of publication, interventions examined, outcome reported, methods and analysis, sample, setting or location of treatment intervention, effectiveness of treatment intervention, results, limitations, and ethical quality indicators such as funding, institutional review board approval and consent forms (Table 1).

Quality Appraisal

The AMSTAR tool, an 11-item measurement tool, was used to appraise the methodological quality of the three systematic reviews included in this report. The AMSTAR tool was developed by combining items from the enhanced *Overview Quality Assessment* questionnaire by Oxman and Guyatt (1991) and a checklist created by Sacks et al (1987) with three additional items the authors judged to be of methodological importance: (a) language restriction, (b) publication bias and (c) inclusion of grey literature (Shea et al., 2007, p. 2). The tool was applied to 99 paper-based reviews and 52 electronic systematic reviews and an

exploratory factor analysis was performed to identify the underlying components (Table 2). AMSTAR developers recognized the need for a tool that would not only measure methodological quality but that could be also be applied to a wide variety of systematic reviews such as those reviews that may not have a meta-analytic component. As such, AMSTAR was psychometrically developed so that each item can be scored individually, as if not related to each other, and could be scored as a checklist by summing the item scores to obtain an overall score (Shea et al., 2009, p. 1016). The AMSTAR tool was found to have strong inter-rater reliability and face, content and construct validity (Kang et al, 2012; Shea et al, 2007). Both Shea et al (2009) and Kang et al. (2012) reported that AMSTAR, as a tool for measuring methodological quality of systematic reviews, demonstrated both external reliability and was found to be easy to use taking approximately 10 to 15 minutes to complete. In fact, Kang et al (2012) claimed “the performance of AMSTAR in terms of reliability and validity was better than OQAQ (Overview of Quality Assessment Questionnaire)” (p.5).

A numeric value was ascribed to each item for the purpose of obtaining an overall score as part of the grading for the overall quality of the reviews. For example, a *yes* or *not applicable* rating was scored with a numeric value of “1” while a *no* or *can't answer* rating received a numeric value of “0” for each checklist item. To arrive at a comprehensive judgment of quality, each individual study was assigned a grade of “good”, “fair”, or “poor” based on the overall score (Shea et al., 2009, p. 1016). Below is an explanation for each grading score:

- good = the systematic review received an overall score between 10-11 of the quality dimensions defined in the AMSTAR tool;
- fair = the systematic review received an overall score of 7-9 of the required quality dimensions defined by the AMSTAR tool; and

- poor = the systematic review received an overall score that is <7 of the required quality dimensions.

Each systematic review was graded using their overall score to yield a grade of “good”, “fair”, or “poor”. The grade range using the overall score was fair (Martin et al, 2011) to good (Morgan et al., 2011; Fontanarosa et al., 2013). The ratings for quality appraisal for each study can be found in Table 2.

Inter-rater Reliability

Each author independently performed a preliminary evaluation of the three studies using the AMSTAR quality appraisal checklist. Both authors met to review their assessment and that meeting resulted in a 73% agreement. A discussion took place to review the questions where there were differences in the rating for each item. The primary areas of disagreement focused upon differences in the interpretation of items such as item #4 (grey literature), item #5 (studies included and excluded), item #7 (scientific quality of studies assessed and documented) and item #11 (conflict of interest stated). Some of the items of disagreement (four, five and seven) in this study were also noted to present disparity in interpretation for Shea et al. (2009) and Kang et al. (2012) when testing the reliability and external validity of the AMSTAR tool. Inter-rater reliability of 94% agreement was reached with the exception of one item (#4) during the meeting.

Results

To answer the first research question – “*What are the types of treatment interventions used for offenders with mental illness who are preparing for reentry, and are they effective?*” an overview of treatment interventions and their effectiveness are discussed. Treatment effectiveness was defined in terms of the outcomes measures. Most treatment interventions for

offenders with mental illness were targeted either at a reduction in recidivism rate or a reduction in psychiatric symptoms or a reduction in both, recidivism and symptomatology. Criminogenic outcomes often look at reduction in recidivism in terms of re-incarceration, re-arrest, violent crime, jail days, criminal history or time to failure. Mental health outcomes consider a reduction in symptoms, reduced substance abuse, medication adherence, coping, independent functioning and decreased depressive symptoms.

Two of the three systematic reviews (Martin et al, 2011; Morgan et al., 2011) conducted meta-analyses based on single treatment components (i.e., presence or absence of a homework component, length of treatment, primary therapeutic orientation) and did not give detailed information on the specific types of treatments. The meta-analysis performed by Martin, Dorken, Wamboldt & Wootten (2012) noted that certain intervention characteristics such as treatment location, the extent to which an intervention was voluntary, and if there was a pre-determined duration all had some moderating effect on outcomes. Studies that had both correctional institution and community components had larger effect sizes ($L = 0.17$, 95% CI [0.05, 0.29]) compared to interventions in the community component only, larger effect sizes for interventions that were somewhat or completely voluntary compared to involuntary interventions ($L = 0.72$, 95% CI [0.05, 0.29]) and no difference in the effect sizes between interventions that were time-limited versus those interventions that had no time limit (p. 4). There are benefits to brief treatment interventions while incarcerated.

The Martin, Dorken, Wamboldt & Wootten (2012) systematic review, that combined the effect sizes of 25 studies, supported the effectiveness of treatment interventions for offenders with mental illness. Their review showed that treatment interventions were effective in reducing criminal justice involvement. However, when the mental health outcomes were aggregated, there

was no significant effects ($k = 20$, $N = 3657$, $d = 0.00$, 95% CI [-0.06, 0.07]). The authors suggest that there is some relationship between treatment effects and mental health outcomes although future research is needed in this area.

These authors also noted key treatment intervention characteristics like an open admission policy, use of homework and treatment setting that played a role in treatment benefit. If the treatment intervention had the element of an open admission policy to join, results showed that 47% (9 of 19) of the studies had effect size's (ES) equal to or greater than 1.00 while a closed group policy produced only 36% (4 of 11) with the same ES equal to or greater than 1.00 (p. 45). Of interest was the use of homework exercises (an activity that requires the offender to practice new skills) that tended to produce more favorable outcomes for offenders with mental illness. Programs that incorporated homework assignments showed positive effect sizes with "75% ($k = 6$) producing ES 's equal to or greater than 1.00" (p. 45). Practicing new skills outside of the treatment program helps to reinforce positive behaviors that can become more automatic and replace the negative or problematic behaviors and skills that offenders struggle with. Treatment programs that occurred during confinement are shown to be effective for offenders with mental illness.

The research synthesis by Morgan et al. (2012) identified treatment outcomes as a group of eight categories: mental health symptoms, coping, institutional adjustment, behavioral functioning, criminal recidivism, psychiatric recidivism, treatment-related factors, and financial benefit. The principal findings from their synthesis was that interventions for offenders with mental illness were effective in "reducing symptoms of distress, improving ability to cope with problems, and improving behavioral markers including institutional adjustment and behavioral functioning" (p.45, 46). Results for interventions on recidivism were statistically inconclusive.

Their examination of the 26 empirical studies revealed that treatment gains could be effectively achieved during incarceration.

In the Fontanarosa, Uhl, Oyesanmi, & Shoelles (2013) systematic review on the comparative effectiveness of interventions, an Agency for Healthcare Research and Quality (AHRQ) evidence-based report, the authors evaluated 19 studies based on the type of treatment programs as either incarceration-based (pharmacologic therapy, psychological therapies and comprehensive interventions for dual diagnosis) or incarceration into the community (high-fidelity integrated dual disorder treatment, mentally ill offender community transitional program, discharge planning interventions, interpersonal therapy). The modified treatment community and the intensive outpatient services showed reductions of substance abuse (alcohol use, substance use, frequency of alcohol use, and highest frequency of drug use) from baseline to 6-month follow-up. Also discharge planning with benefit-application assistance appears to increase mental health service use for offenders with mental illness preparing to reenter the community. The authors propose that therapeutic communities can be adapted for a prison setting to treat offenders with co-occurring mental health and substance use disorders. For incarceration to community, treatment interventions such as Assertive Therapeutic Community, intensive case management, or correctional reentry intervention had better outcomes than treatment as usual upon release.

The Fontanarosa et al. (2013) study, defined mental health outcomes as: (a) suicide and suicide attempts, (b) quality of life, (c) independent functioning, (d) psychiatric symptoms, (e) new mental health diagnosis, (f) substance abuse or alcohol use, (g) hospitalization for serious mental illness, (h) time to re-hospitalization, (i) time to relapse, (j) dangerousness to others, (k) recidivism and (l) other criminal justice outcomes. Treatment effectiveness for mental health

outcome was guided by the AHRQ's guidelines "Methods Guide for Effectiveness and Comparative Effectiveness Reviews" (Fontanarosa et al., 2013, p. ES-8). Each major mental health outcome was measured according to four core domains: risk of bias, consistency, directness, and precision. Based on their review, there is still a need for more comparative, randomized studies on this topic in order to confidently evaluate effectiveness of a particular type of intervention and the variations in fidelity of the intervention. Their results showed that pharmacologic therapy in an incarceration setting versus other therapies did appear to improve mental health symptoms while discharge planning with benefit-application assistance appeared to improve the use of mental health services for incarcerated individual preparing to reenter the community (p. ES-18). Each publication included in their systematic review defined mental health outcomes or criminal justice outcomes differently making generalizations about treatment effectiveness problematic.

Overall, the limited treatment interventions available for offenders with mental illness appear effective in reducing mental health and criminal symptoms; however, the evidence found are taken with caution and are not making any inferential conclusions.

To answer the second research question: "*Are there any booster treatment interventions used for offenders with mental illness as part of the reentry process?*" this review noted that no booster treatment interventions were identified in any of the studies reviewed. Although two of the systematic reviews did not state the specific types of treatment interventions included in the review, the intervention characteristics that were provided did not reflect a booster intervention program.

Discussion

The aims of this literature review were to examine the existing literature on the types of treatment programs for offenders with mental illness and the effectiveness of these programs, and to propose a booster intervention in the correctional setting for offenders with mental illness who are preparing for the reentry process. The existing literature cautiously suggests that treatment interventions for offenders with mental illness are effective and beneficial in reducing mental health and criminal symptoms. However, the evidence to support these findings is based on a small body of treatment intervention outcome research that continues to be “almost non-existent” for this vulnerable population (Morgan et al, 2012; Skeem et al, 2011). A national survey on reentry programs found that there were very few treatment programs that focused on reducing recidivism, improving psychiatric status and enhancing quality of life (Wilson & Draine, 2006, p. 878).

Despite the concerns raised by researchers and practitioners on how to best treat offenders with mental illness to reduce recidivism, promote health and successful reintegration, empirical research and dissemination of this type of research is advancing at a slower rate than the concerns expressed. Factors that may contribute to the lack of this type of research includes: the ethics of conducting rigorous research with a vulnerable population, high attrition rates and small sample sizes that can affect the power to detect a significant difference in treatment versus control groups, potential for “lock downs” that can halt treatment intervention sessions, and use of different outcome measurements in studies that limit effective analysis across studies. For example, criminal justice systems are primarily interested in criminal justice outcomes, such as recidivism, while mental health providers are often concerned with reduced psychiatric symptoms and quality of life outcomes. This interferes with making comparisons between treatment programs

Based on this appraisal of the three systematic reviews, a booster treatment intervention has not been tested in the correctional setting for offenders with mental illness and can be a feasible, cost-effective and practical treatment intervention for reinforcing treatment gains, practicing newly learned skills and minimizing offenders prematurely leaving programs due to the brevity of booster interventions. Booster programs have been used in the fields of education and psychology for maintaining treatment gains achieved as well as enhancing initial treatment effect of the original program (Bundy, McWhirter & McWhirter, 2011; Mangels, Schwarz, Warringen, Holmes & Reif, 2009; Tolan, Gorman-Smith, & Schoenry, 2009). Booster sessions have been investigated as treatment interventions to determine their effectiveness with assertiveness training (Baggs & Spence, 1990), motivational interviewing (Scott et al. 2011; Sussman, Sun, Rohrback & Spruijt-Metz, 2012), and cognitive training (Baker & Wilson, 1985) all with positive results. Booster programs have been shown to be effective in strengthening treatment gains in other fields although the exact number or “dosing” does vary across programs. A booster intervention, as part of an offender’s prerelease planning, could provide these same benefits to offenders with mental illness.

According to Morgan et al., (2012) significant treatment gains that begin during incarceration and that continue with treatment services provided in the community are more likely to improve recidivism (p. 47). The benefits of reinforcing treatment gains includes: (1) to promote engagement and adherence to treatment provided to the offender during incarceration and after release, (2) to provide an opportunity for soon to be released offenders to practice and reinforce skills and behaviors that promote positive consequences (enhance self-care behaviors and manage mental health symptoms), and (3) to support self-efficacy by boosting perceived

confidence in their skills (re-skilling). These benefits can be realized with a booster treatment intervention that strengthens self-care behaviors.

Conclusion

There is little evidence from this review to endorse a particular treatment intervention as being more effective in reducing mental health outcomes or criminal outcomes. There are limited numbers of comparative trials that measure the same treatment intervention and the same outcomes diluting the strength of the evidence. Effect sizes were small for criminal outcomes and mental health outcomes, although more positive for criminal outcomes. Treatment program fidelity is infrequently mentioned and study quality lacked strength (Fontanarosa et al, 2013). Results suggest that there are treatment interventions that are beneficial such as cognitive therapy, behavioral programs, and assertive community therapy. Treatment programs that target both psychiatric and criminal recidivism had positive effects (Morgan et al., 2012). There are also some treatment characteristics that were identified as effective in reducing symptoms of distress and improving ability to cope such as use of an open group policy, use of homework, and use of treatment programming during incarceration (Morgan et al., 2012, p. 45). However, given the problems with recidivism among offenders with mental illness (Cloyes et al., 2010; Barrenger & Draine, 2013; Wikoff, Linhorst, & Morani, 2012) it seems that any positive treatment effects can gradually diminish over time and eventually fade leading to relapse of mental health symptoms and criminal behavior.

Proposed Booster Intervention

Booster interventions have been tested in the field of education and psychology with small to moderate effects. This type of a brief treatment intervention may be effective in the correctional setting by bolstering skills learned from the lengthier program and maintaining the

positive treatment gains. The timeline of the booster treatment intervention is deliberately shortened. The shorter intervention reviews the main goals of the original program and with a briefer format can minimize problems with attrition. Keeping the length of sessions and total number of days long enough to cover the material but brief enough to keep participants engaged also minimizes dropout rate. As with any treatment program, booster interventions must be implemented in a similar format to the primary intervention for treatment fidelity. A booster intervention is a way to take an existing, effective treatment program for offenders with mental illness and reinforce skills previously learned utilizing characteristics such as open door policy that allows individuals to enter the treatment group at any time and assigning homework.

Limitations

This review reports on existing systematic reviews and has several limitations. First, the potential for publication bias due to the limited number of databases searched ($n=3$) and the omission of searching grey literature. Second, there is the risk of bias by reporting the synthesis of existing systematic reviews, which in themselves have limitations. Third, the findings are limited by what has been published on this topic and by the studies selected as part of the systematic reviews. Despite these limitations, this review is informative and shows that treatment interventions do have benefit although it is clear there remains a need for further research on this topic. It is also clear that booster interventions have not been implemented and evaluated in the correctional setting. This type of intervention can maximize treatment outcomes for offenders with mental illness through reinforcing skills learned, sustaining treatment engagement and assisting with transition to the community. Those directly involved in the treatment of offenders with mental illness, such as psychiatrists, psychologists, correctional nurses, and social workers are well positioned in the correctional setting to implement a booster intervention, examine the

effectiveness of this type of brief treatment intervention and disseminate the findings on the treatment effectiveness.

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Figure 1: Summary of Literature Search

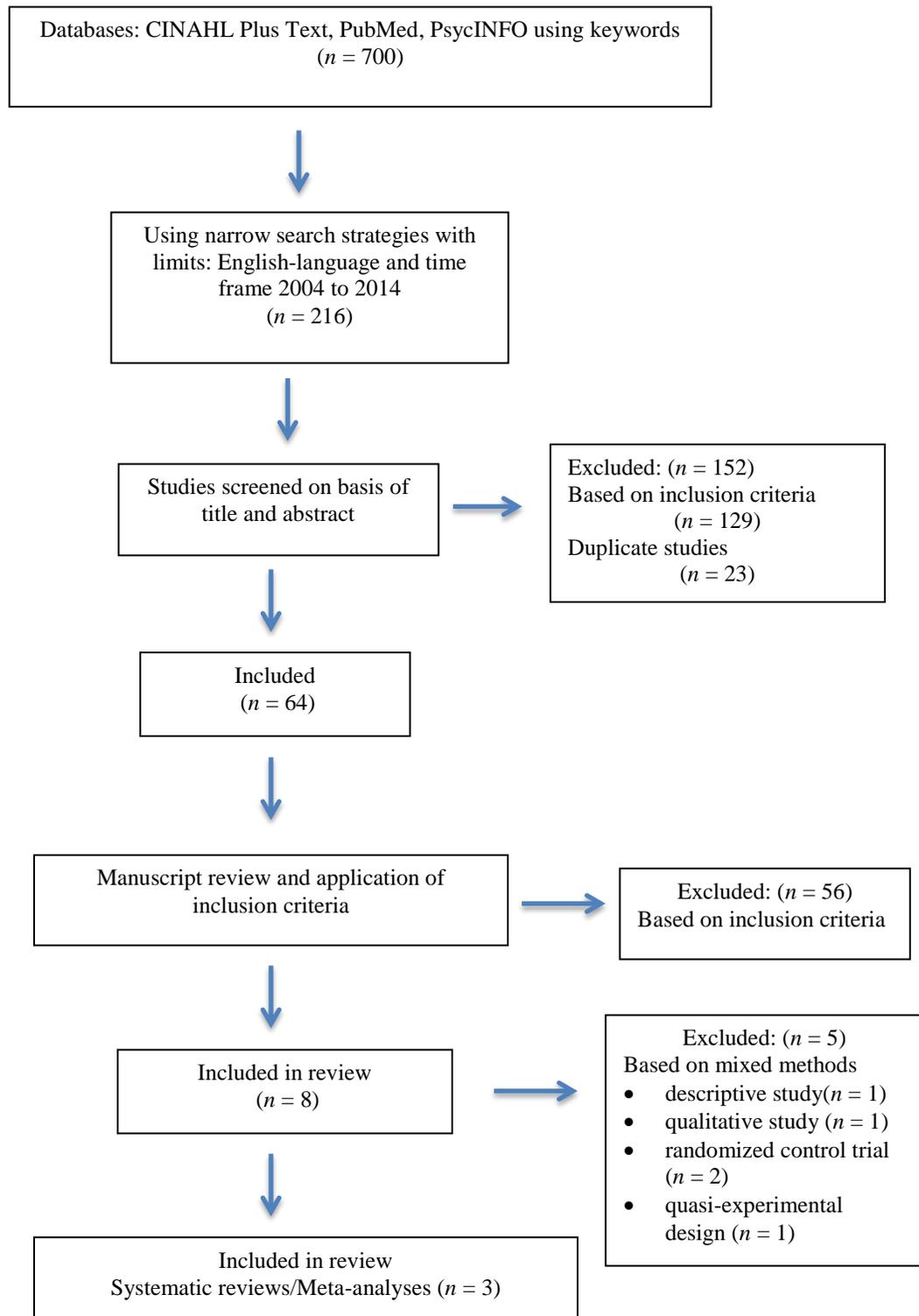


Table 1: Summary of Articles

Author and Year	Interventions Examined	Outcome Measures	Methods	Sample/Setting	Findings
<p>(1) Bewley & Morgan (2011)</p>	<p>Types of interventions</p> <ul style="list-style-type: none"> • MH awareness • Anger management • Stress management • Problem solving • Recidivism • Institutional adjustment • Symptom management • Medical adherence • Substance Abuse • Vocational skills • Social skills • Decision skills • Negative affect • Cognitive restructuring • Relationship enhancement • Antisocial peers <p>MH Providers: Psychiatrists, Psychologists, professional counselors, social workers, criminologist and “other workers”</p> <p>Participants accessed treatment voluntarily, court mandated or assigned program</p>	<p>Goals and perceived outcomes of mental health services covered four treatment foci:</p> <ul style="list-style-type: none"> • mental illness, • skill development, • behavioral functioning • criminogenic needs <p>Mental illness defined by Axis 1 and Axis 2 disorders</p>	<p>Descriptive Research</p> <p>474 surveys sent to 165 facilities and only 230 surveys completed and returned (48.5% return rate)</p> <p>47 states represented out of 50</p> <p>35 state correctional facilities recruited did not participate for various reasons (unable to obtain IRB approval from facility)</p> <p>Survey was pilot tested prior to this study</p>	<p>Participants consisted of 230 correctional MH service providers from 165 state correctional facilities – survey</p> <p>Response rate – 48.5%</p> <p>4 state’s prisons were randomly selected – 47 of 50 states in US represented by at least 1 facility</p> <p>115 men and 114 women</p> <p>Setting: correctional facilities</p>	<p>Results: indicate that MH professionals provided a variety of services to offenders with mental illness that can be conceptualized by six goals considered important in their work:</p> <ol style="list-style-type: none"> (1) Mental illness recovery (2) Emotions management (3) Institutional functioning (4) Reentry (5) Risk-need (6) Personal growth <p>Results are informative re: availability, importance & effectiveness of MH services for OMI</p> <p>Limitations: survey has face validity but reliability and validity of reported information is unknown; had a low number of psychiatrists in the sample and other MH providers do not consider risk need interventions to be psychotherapy; study only assessed services to MALE offenders</p>

Author and Year	Interventions Examined	Outcome Measures	Methods	Sample/Setting	Findings
<p>(2)Fontana ros, Uhl, Oyesanmi, & Shoelles (2013)</p>	<p>Types of interventions</p> <p>Incarceration based treatment:</p> <ul style="list-style-type: none"> - pharmacological - psychological therapies such as cognitive therapies - Modified Therapeutic Community (MTC) - <p>Incarceration to community:</p> <ul style="list-style-type: none"> - Integrated Dual Disorder Treatment (IDDT) - The mentally ill offender community program - Discharge planning that included assistance with applying for mental health services - Interpersonal therapy <p>MH Providers: not identified</p>	<p>For both incarceration-based and incarceration-to-community transitioning interventions, the outcomes of interest are:</p> <ul style="list-style-type: none"> - Suicide and suicide attempts - Quality of life - Independent functioning - Psychiatric symptoms - New mental health diagnosis - Substance or alcohol use - Hospitalization for serious mental illness - Time to re-hospitalization - Time to relapse - Dangerousness to others - Recidivism - Other Criminal justice outcomes 	<p>Research Synthesis: searches covered the time period January 1, 1990, through April 1, 2012 and updated through August 20, 2012, during the public posting period.</p> <p>Inclusion criteria:</p> <ul style="list-style-type: none"> - randomized trials or nonrandomized comparative trials that employed a matching procedure - two or more interventions of interest versus standard of care - 75% of subjects had SMI - published in English & conducted in US, Canada, New Zealand or Australia - reported at least one mental health outcome - Included a minimum follow up period of 3 months 	<p>Setting: RQ1, the intervention settings were jail, prison, and forensic hospital. For RQ2, the settings were jail to community, prison to community, and forensic hospital to community. Release to the community includes direct release to home or family and release to a transitional setting (e.g., halfway house, work release program)</p>	<p>Results: Only a few comparative trials assessing interventions for offenders with SMI in an incarceration or incarceration-to-community transitional setting. The trials lacked consistency in treatment comparisons and varied in how they applied the same treatment, in how they combined treatments, and in the outcomes they reported.</p> <p>Limitations: Publication bias</p>

Author and Year	Interventions Examined	Outcome Measures	Methods	Sample/Setting	Findings
(3) Martin, Dorken, Wamboldt, & Wotten (2011)	<p>Types of interventions</p> <p>Characteristics included:</p> <ul style="list-style-type: none"> - medications - individual or group therapy - social skills training - cognitive behavioral therapy - anger management - problem solving <p>MH Providers: not identified</p>	<p>Design characteristics included whether random allocation was used, sample size, type of control group (i.e., alternate mental health service versus no service/treatment as usual), treatment duration, and follow-up length in months</p>	<p>Meta-analysis: All four authors then coded all included studies for participant, intervention, and design characteristics, and for study quality.</p> <p>Inclusion Criteria:</p> <ul style="list-style-type: none"> - published no later than the end of 2008 in a peer-reviewed journal or having gone through another review process (e.g., a thesis defense) - included a comparison group - tested the hypothesis that a particular intervention either improves offender mental health and/or reduces re-involvement with the CJS - had a sample size of at least five - reported necessary statistics to compute an effect size - had a sample of adults with mental disorders who were formally processed by the CJS. 	<p>The 25 studies published between 1989 to 2008</p> <p>Setting: community, institutions or both</p>	<p>Results: assuming a fixed-effects model combining 37 effect sizes from 25 studies ($N = 15,678$) support the effectiveness of these interventions in terms of reductions in any CJS involvement ($d = 0.19$ excluding one outlier).</p> <p>Interventions had no significant effect on an aggregate mental health outcome ($d = 0.00$). However, when disaggregating outcomes, mental health outcomes, intervention participants had significantly better functioning ($d = 0.20$) and fewer symptoms ($d = 0.12$)</p> <p>Limitations: potential publication bias with use of two data bases (PscyINFO and Web of science); absence of power analysis</p>

Table 2: AMSTAR (Assess Methodological Quality of Systematic Reviews)

CHECKLIST	Martin et al, 2011	Morgan et al, 2011	Fontanarosa et al, 2013
<p>1. Was an ‘a priori’ design provided? The research question and inclusion criteria should be established before the conduct of the review.</p>	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable
<p>2. Was there duplicate study selection and data extraction? There should be at least two independent data extractors and a consensus procedure for disagreements should be in place.</p>	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable
<p>3. Was a comprehensive literature search performed? At least two electronic sources should be searched. The report must include years and databases used (e.g. Central, EMBASE, and MEDLINE). Key words and/or MESH terms must be stated and where feasible the search strategy should be provided. All searches should be supplemented by consulting current contents, reviews, textbooks, specialized registers, or experts in the particular field of study, and by reviewing the references in the studies found.</p>	Yes x No x Can’t answer Not applicable *disagreement	Yes x No x Can’t answer Not applicable *disagreement	Yes x No Can’t answer Not applicable
<p>4. Was the status of publication (i.e. grey literature) used as an inclusion criterion? The authors should state that they searched for reports regardless of their publication type. The authors should state whether or not they excluded any reports (from the systematic review), based on their publication status, language etc.</p>	Yes No Can’t answer x Not applicable	Yes No Can’t answer x Not applicable	Yes No x Can’t answer Not applicable
<p>5. Was a list of studies (included and excluded) provided? A list of included and excluded studies should be provided.</p>	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable
<p>6. Were the characteristics of the included studies provided? In an aggregated form such as a table, data from the original studies should be provided on the participants, interventions and outcomes. The ranges of characteristics in all the studies analyzed e.g. age, race, sex, relevant socioeconomic data, disease status, duration, severity, or other diseases should be reported.</p>	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable
<p>7. Was the scientific quality of the included studies assessed and documented? ‘A priori’ methods of assessment should be provided (e.g., for effectiveness studies if the author(s) chose to include only randomized, double-blind, placebo controlled studies, or allocation concealment as inclusion criteria); for other types of studies alternative items will be relevant.</p>	Yes No x Can’t answer Not applicable	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable
<p>8. Was the scientific quality of the included studies used appropriately in formulating conclusions? The results of the methodological rigor and scientific quality should be considered in the analysis and the conclusions of the review, and explicitly stated in formulating recommendations.</p>	Yes No x Can’t answer Not applicable	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable
<p>9. Were the methods used to combine the findings of studies appropriate? For the pooled results, a test should be done to ensure the studies were combinable, to assess their homogeneity (i.e. Chi-squared test for homogeneity, I²). If heterogeneity exists a random effects model should be used and/or the clinical appropriateness of combining should be taken into consideration (i.e. is it sensible to combine?).</p>	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable	Yes x No Can’t answer Not applicable

10. Was the likelihood of publication bias assessed? An assessment of publication bias should include a combination of graphical aids (e.g., funnel plot, other available tests) and/or statistical tests (e.g., Egger regression test).	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable <input type="checkbox"/>
11. Was the conflict of interest stated? Potential sources of support should be clearly acknowledged in both the systematic review and the included studies.	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable <input type="checkbox"/>
Total Score	7	9	9
Grade Score: <i>Good = a quality score of 10-11</i> <i>Fair = a quality score of 7-9</i> <i>Poor = a quality score <7</i>	Fair	Good	Good

From: Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews. BMC Medical Research Methodology, 2007 Feb 15;7:10. PMID: 17302989

Chapter Three: Article 2

Addressing Methodological Issues in Correctional Health Research: A Case Study

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Abstract

This case study describes the experiences of a novice correctional nurse researcher's application of the recommended strategies from correctional literature to improve the conduct of research in correctional institutions. An innovative booster intervention was implemented and evaluated as a pilot study in a state correctional institution. Correctional nurse researchers encounter many challenges and this case study shares challenges that persisted and concludes by recommending ways to strengthen and improve upon learned strategies proposed by experienced correctional nurse researchers.

Addressing Methodological Issues in Correctional Health Research: A Case Study

The current literature speaks to the unique challenges correctional nurse researchers have encountered while conducting research in the prison setting and to the ethical considerations that must be considered to protect this vulnerable population (Ferszt & Hickey, 2013). Historically, there were several examples, such as inducing diseases in offenders to test treatments or conducting clinical trials of drug toxicity (Byrne, 2005), which contributed to restricting and scrutinizing prison research.

There has been tremendous progress in the protection of offenders from being exploited by well-intentioned research. These protections include: full board review by Institutional Review Board's (IRB) with an offender advocate and dual approval by a Department of Correction (DOC). This dual process often delays the approval process and can be considered a drawback to correctional research. Once approval is obtained, access to participants may be a lengthy process. Some authors suggest that the safeguards in place to prevent harm to offenders may have gone to the opposite extreme discouraging this type of research (Moser et al., 2004).

Authors also suggest approaches to facilitate the research process. Approaches to facilitate the research process included: developing collaborative relationships (Apa et al, 2012), piloting a small proposal (Wakai, Shelton, Trestman, & Kesten, 2009), fostering communication with key contacts and correctional officers (Maeve, 1998), acquiring knowledge of the specific prison system (Bryne, 2005), and establishing credibility (Ferszt & Hickey, 2013). Disseminating this knowledge is helpful for nurses who are interested in pursuing research in this distinctive environment especially given there are few nurse researchers in this specialized field (Ferszt & Hickey, 2013).

The objectives of this case study are: (1) to describe a novice correctional nurse researcher's application of the recommended strategies to improve the conduct of research in correctional institutions, (2) to share challenges that persisted, and (3) to contribute to correctional research by recommending ways to strengthen and improve upon learned strategies proposed by nurse researchers.

Description of the Case

A four-session cognitive-behavioral booster intervention, adapted from a 32-session primary treatment intervention (Wakai, Shelton, Trestman, & Kesten, 2009), was pilot tested in a state correctional institute. The booster intervention was a group intervention conducted with female offenders who had prior involvement in the primary intervention. Each group consisted of five members and met twice per week over the course of two weeks. There were four groups totaling twenty female offenders as part of this pilot study. The aim of the pilot study was to implement and examine the benefit of the booster intervention in reinforcing learned self-care behaviors prior to release to promote successful reentry to community living (Maruca, Barta & Shelton, 2014). The focus of the skills provided during the booster intervention included: recognizing and regulating emotional responses to situational cues, strengthening self-control over emotional and social impulses, decision making based on understanding of consequences of behavioral responses to stressful situation and practicing coping strategies to manage stress. Each group session was 75 minutes in length and centered on these four skills in the context of identifying the importance of building positive social connections and setting realistic and achievable future goals through the group process. Participants had worksheets to use outside of the group as homework to practice new behavioral responses to stressors, to identify how to think before acting, and to exercise control over their emotional responses. Of the 20

participants, 17 stayed the full time at every session, two participants left a group session early, and one member missed a group session due to a unit lockdown. All members who completed the intervention received a Certificate of Completion.

Discussion

The prison environment inherently presents methodological challenges to research for correctional nurses. This case study highlights some practical applications of the strategies recommended in the literature, discusses what worked in this pilot study and suggests ways to address research challenges based on this pilot study.

1. Research Recommendations Applied

Based on a literature review, several recommendations to deal with challenges conducting prison research were applied to this pilot study. First, there was a focus on establishing a collaborative approach (Apa et al., 2012) between the researchers, key representatives from the DOC and the clinician developers of the primary treatment program. Establishing these key relationships was necessary for the primary investigator who is new to correctional research. These meetings served to obtain needed support for the pilot study, entry into the prison, program training, recruitment, and scheduling of group sessions (Bryne, 2005). Arrangements were made with the Assistant Warden to offer the booster during the evening hours after evening count to assure all offenders are accounted for, before visiting hours and after most required programs so as not to interrupt offender's participation in prison programs or missing visiting hours (Ferstz & Chambers, 2011). The evening hours worked best for participants and did improve attendance at the group sessions. Familiarity with the correctional setting also proved helpful in navigating around the correctional facility. The first author had

prior experience participating in a research project led by the second author in the same facility that this pilot study took place.

The Institutional Review Board (IRB) at the University had experience with correctional research reviews. Their experience facilitated the review process, maintained a balance between protection and preservation of the rights of offenders who are considered a vulnerable population, and assisted in making a lengthy process proceed smoothly despite needing to receive additional approval with the Research Advisory Committee at DOC (Wakai, Shelton, Trestman, & Kesten, 2009). DOC's are risk aversion institutions so it is vital to carefully plan to allay DOC's concerns regarding information shared with others. In addition to adherence to standard ethical practices that protects offender information, the primary researcher obtained a Certificate of Confidentiality that provided the researcher with the right to resist most legal requests for disclosure of offender information (Byrne, 2005).

Working with the correctional officers (CO) and staff to adhere to the rules was very helpful. Often the CO's would be the ones to call the participants to group ensuring each one received the message. On two occasions CO's familiar with the pilot study found a different room location to hold the group session when the assigned room was double booked. This collaboration, essential for the researcher, meant extra time out of their routine and redirection of their attention from their duties.

2. Persistent Research Challenges

Challenges did persist despite applying the previously mentioned recommended research strategies. Correctional institutions employ many procedures to ensure the safety of every offender, CO, staff and visitor. As such, some of these procedures can lead to major time delays in conducting research. Evening count to account for all offenders took extra time on a few

occasions so it was necessary to wait longer for a CO to escort the researcher to the assigned location so the group session started later. At least three facility lockdowns prevented entry into the prison and interrupted the sequencing of group sessions. These procedures are in place for security reasons so the nurse researcher should add time to any research design and protocol to account for these inevitable delays.

Recruitment was the most challenging part of this pilot study. The clinicians who designed the primary intervention required that their clinical liaison interface with potential participants first to determine if they were willing to meet with the nurse researcher and then schedule the days, dates, and times for the recruitment and consent meeting to occur. Once the nurse researcher met with the female offenders, they all agreed to be part of the study. The use of an intermediary in this recruitment process lengthened the timetable for the intervention (long gaps in recruiting, delays in start dates for each group) and affected the size of the sample. As a result of this recruitment process, it took over one year to recruit 20 women who met study criteria and the reason for a small sample size. Use of clinicians in this process also adds a clinician bias to the recruitment.

Movement of offenders between housing areas/units and those who were released early negatively influenced the size of the sample. There were occasions when participants were moved between units. More frequent communication with the clinical liaison to get information quickly that impacted the booster intervention would have been helpful. Communication by email and telephone was more difficult in correctional settings compared to other clinical settings. This was due to a clinician's schedule with dual responsibilities to department of correction and correctional managed health care as well as being away from their desk to respond to email or phone calls.

Additional challenges for this pilot study were the questionnaires used for data collection. Although a questionnaire on mental health status was used by a state department in a community setting with paroles to evaluate the effect of the primary program, it was not used for the purpose of testing for reliability and validity with an offender population. Despite the appropriate grade level for reading some questions were not applicable to the correctional environment. Furthermore questions needed to align with the lifestyle constraints and rules found in a prison so participants could answer questions in relation to prison life.

The constraints of the prison environment challenge implementation of methodological rigor. The close living quarters of the female offenders is another example of the challenge of maintaining methodological rigor in research when participants live together in close quarters. Close living proximity allowed for conversations about the booster intervention, the group sessions and questionnaire to take place between participants outside the formalized group sessions. It was difficult to prevent contamination between participants between the four groups during the time period of treatment as usual where participants served as their own control. Comments such as “you will love being part of this program,” and “you will be glad you said yes to this group” and “I went to the same group. It was great” were heard by the primary researcher as offenders passed by each other during recruitment, prior to the start of a group session, and during group session.

3. Improvements to facilitate future nursing science

Streamlining recruitment by allowing nurse researcher’s access to offenders will do much to improve correctional research. An example of streamlining recruitment would include designing the recruitment process without a clinician liaison. Additional time spent in exploring strategies to achieve this approach to recruitment and to address concerns may have yielded

better results. When designing research protocols, the nurse researcher needs to incorporate additional time for institutional procedures that are known to cause potential delays. As a novice researcher, it is important to take initiative to be more visible at the correctional institution; mature relationships developed and maintain frequent communication to strengthen collaboration.

Research in correctional settings can be very discouraging despite the many rewards from working with this vulnerable population. Although collaborative relationships between DOC, correctional clinicians and nurse researchers are strengthening and developing, there is room for growth. Debriefing after any research study with all parties can be helpful by sharing experiences that identifies what worked well, what didn't work well and ways to improve the process.

More research is needed to develop and/or modify instruments used with the correctional population. Instruments need to reflect the correctional environment and culture to accurately measure the intended outcome.

Conclusion

The purpose of this case study was to describe a novice correctional nurse researcher's use of strategies recommended to improve the conduct of research in correctional institutions, to share what difficulties still persist, and to contribute to advance this field by proposing additional strategies based on this pilot study.

One of the major advantages of conducting this pilot study was that it assisted in demonstrating the research strategies most useful for effective implementation for a future replication of the booster treatment intervention on a larger scale. This pilot study launched new relationships with DOC, correctional clinicians, and correctional nurse researchers that will be strengthened and maintained for future studies. Knowing what to expect and recognizing

institutional procedures beyond the correctional nurse researcher control provides the framework for ushering in new strategies to promote, support, and encourage an increase in research and dissemination through publication by correctional nurses.

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Chapter Four: Article 3

A Booster Intervention in a Connecticut Correctional Institution: A Pilot Study

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Abstract

Purpose: This pilot study examines the effectiveness of a 4-session booster intervention for offenders with mental illness in a correctional setting.

Methods: This was a self-controlled case series design quantitative study. The twenty consenting female offenders in a correctional setting were non-randomly assigned to four groups of five members. Three repeated measures of data collection using two surveys occurred at baseline, pretest and posttest. Data were analyzed using hierarchical linear modeling.

Findings: This pilot study provides preliminary support for the effectiveness of a booster intervention in correctional institutions in bolstering and reinforcing previously learned self-care behaviors.

Conclusion: The change in self-care behaviors observed was small yet potentially clinically meaningful. Not only did the booster intervention reinforce self-care behaviors, but the brevity of the intervention supported treatment adherence.

Clinical Relevance: A booster intervention can maximize skills, reinforce knowledge, sustain treatment engagement and assist with transition to the community while supporting treatment completion.

Key words: booster intervention, corrections, offenders, mental illness, treatment

A Booster Intervention in a Connecticut Correctional Institute: A Pilot Study

Research shows that treatment interventions in correctional settings aimed at improving cognitive skills, problem solving, goal setting and stress management has a positive effect on reducing recidivism for offenders (Clark, 2010; Khodayarifard, Yekta, & Hamot, 2010).

Research evidence further shows that cognitive-behavioral approaches to treatment were effective among offenders with high-risk behavior (Landenberger & Lipsey, 2005; Lipsey, Landenberger & Wilson, 2007; Milkman & Wanberg, 2007). Despite the positive evidence on the efficacy of treatment interventions and particularly cognitive-behavioral approaches, treatment effects tend to gradually diminish over time (Magill & Ray, 2009).

A booster intervention may be effective in the correctional setting to address the concern of diminishing treatment effects. A booster intervention shortens an existing, effective treatment program to reinforce skills previously learned. Correctional settings offer unique challenges in the delivery of health care services, particularly for offenders who struggle with mental illness. Some challenges inherent to the correctional system include unanticipated early releases, transfers of offenders between facilities, or unit lock-downs that all interfere with offenders completing treatment programs. The correctional environment promotes dependency and adherence to rules. This type of culture can constrain self-care behaviors, with self-care defined as the practice of behaviors that protect and promote one's health and wellbeing (Leenerts, 1998, 2003; Orem, 2001).

An evidence-informed cognitive behavioral treatment intervention has been developed and implemented in a state Department of Correction (DOC) to treat offenders with behavioral disorders. The modified cognitive behavioral program offers thirty-two sessions in four units: (1) basic foundational skills, (2) coping with emotions, (3), interpersonal skills, and (4) future

focused skills. The configuration of the booster treatment intervention mirrors the four units of the primary 32-session program. The sessions are built upon cognitive-behavioral principles of changing thought patterns and the behaviors that result from these thought patterns, in order to alert the individual to the emotional reactions that can occur in response to situations. The primary investigator was trained to maintain conformity to the original program; to gain familiarity with the population of offenders with mental illness preparing for release.

Purpose

The purpose of this pilot study was to investigate the effectiveness of a four session's booster intervention in a New England's prison that examined self-care behaviors and mental health status. The research question was "What is the effect of a booster treatment intervention on self-care behaviors and mental health status for offenders preparing for reentry?" The hypothesis is that participants would show improved self-care behaviors and maintenance in mental health symptoms after the booster treatment intervention. The assumption was that participants who received the booster treatment intervention would benefit from the booster intervention by reinforcing self-care behaviors and maintaining treatment gains learned during the primary program.

Theoretical Framework

Offenders often lose their sense of autonomy and ability to practice self-care in the prison environment that constrains such practices. As the offender prepares for release back to the community, these abilities are fundamental to successful transitioning. The booster treatment intervention reintroduces and emphasizes the use of skills such as coping, assertive communication, interpersonal, and future planning that are important components of relearning and practicing self-care behaviors. *The Rediscovery of Self-Care: A Care Model for Persons with*

Incarceration Experience model (Shelton, Barta, & Anderson, 2010) frames the research question to explore the effectiveness of the booster intervention designed to support reinforcing self-care behaviors and coping skills aimed to enhance the physical, mental, emotional and psychological health of offender's as part of their community reentry. This model offers a conceptual approach to assessing changes in released offender's practice of self-care related to treatment intervention.

Method

Design

This study employed a self-controlled case series design (Douglas & Smeeth, 2008; Raman et al., 2013). A key characteristic of this design is that participants serve as their own control so history effects are not a concern and all observations are categorized as either treatment a usual or intervention. Three data collection points included baseline (recruitment), pretest (beginning of intervention), and posttest (end of intervention). An advantage of the method is that confounding factors that do not vary with time, such as treatment as usual, is controlled for implicitly.

Recruitment, Sample Size and Informed Consent procedure

The twenty consenting participants were not randomized to groups, but selected based on meeting inclusion criteria (completed three or four units of the primary program, had a release date within one year, were 18 years of age or older, spoke English, and had mental health or substance abuse problems) and willingness to volunteer. Institutional Review Board approval (IRB Protocol #H12-314) from the University of Connecticut and from the state Department of Corrections (DOC) Research Advisory Committee was obtained prior to recruitment. There were four groups each with five members per group (Julious, 2005).

An appraisal of systematic reviews showed that a booster treatment intervention has not been implemented and tested in correctional institutions upon which to base the sample size for this pilot study (Maruca & Shelton, 2014; Martin et al, 2012; Morgan et al., 2012). However, studies on the effectiveness of interventions used for offenders with mental illness in correctional settings have shown to be cautiously effective with small to moderate effect sizes (Badcock, Green & Robie, 2004; Maruca & Shelton, 2014; Tripodi et al., 2011).

Procedures to protect participant confidentiality included: meeting in a private, but visible space; explanation of the purpose of the study, time requirements and expectations of the study; and, the voluntary nature of their participation. Any questions were answered and clarified as needed. Offenders who agreed to volunteer were asked to sign the consent form and to complete the demographic sheet along with the two surveys.

Data Collection

Demographic information was obtained using a self-report information sheet that was collected at the time of recruitment and included information such as age, level of education, ethnicity, and participation in other treatment groups.

Instruments

The Strategies Used by People to Promote Health (SUPPH) is a 29-item self-report scale developed to measure an individual's confidence in their ability to accomplish self-care behaviors (Lev & Owen, 1996). Refinement of the SUPPH, by Owen and Lev (2001) to validate the dimensionality of the measure supported a three-factor structure: positive attitude (Cronbach's alpha = .92); stress (Cronbach's alpha = .89); and making decisions (Cronbach's alpha = .83). Mak et al.'s study (2009) on social support as a mediator for self-care self-efficacy also achieved excellent internal consistencies for the SUPPH's three subscales (Cronbach's

alphas = 0.95, 0.90, and 0.80 for positive attitude, stress and making decisions). Participants are asked to rate the degree of confidence they have in carrying out self-care behaviors as they experience re-entry issues on a scale from 1 (very little) to 5 (quite a lot). The higher the total score (range from 29 to 145) indicates higher confidence in self-care skills and the ability to perform self-care behaviors.

The SUPPH has been used to measure self-care behaviors with cancer patients (Lev, Paul & Owen, 1999), hemodialysis (Lii, Tsay & Wang, 2007; Tsay & Healstead, 2002) and with depression (Robinson-Smith, Johnston & Allen, 2000). This instrument had never been used with the correctional population and the reading level was not defined.

The Behavior and Symptom Identification Scale-24 (BASIS-24), is an outcome measure of self-reported psychological difficulty that has been used with inpatient and outpatient mental health populations. BASIS-24 measures general and mental health status, substance abuse, social and community functioning, and quality of life. Internal consistency reliability (Cronbach's alpha) coefficients ranged from 0.75 to 0.89 for inpatients and 0.77 to 0.91 for outpatients (Eisen, Normand, Belanger, Spiro & Esch, 2004). Eisen et al's (2006) study measured the reliability and validity for three race/ethnicity groups (White/African-American/Latino) with Cronbach's alpha coefficients exceeding 0.70 for each ethnic group (p. 313). BASIS-24 contains 24 items, each with five ordered responses, reporting either the level of difficulty experienced (0 = no difficulty to extreme difficulty to 4 = extreme difficulty) or the frequency that a symptom has occurred (0 = none of the time to 4 = all of the time).

The 24 questions are scored using a weighted average algorithm that yields six subscales and an overall score. The lower the total overall score out of a total possible score of 96, the less difficulty the respondent self-reports on mental health symptoms (*lower score = better mental*

health status). One question pertaining to “hiding drugs or alcohol” was removed following IRB reviews and at IRB bidding with permission from McLean hospital. Questions are at a fifth grade reading level, are brief, and are easily understood. BASIS-24 was used with a corrections population (parolees) to measure the effectiveness of the primary program with this population.

Intervention

The focus of intervention was to: (a) improve self-control of impulses, (b) recognize social and emotional cues, (c) regulate emotional responses to cues, (d) improve decision making based on consequences, and (e) improve use of coping strategies and stress management with the desired outcome of enhanced self-care behaviors. Participants were provided individual worksheets in a DOC approved folder to keep for reference and as part of homework assignments. A Certificate of Completion was given to participants at the end of the intervention if participants completed all sessions.

Data Analysis

Descriptive statistics were performed using SPSS version 16.0 to provide descriptive sample summaries such as mean age, average educational level, distribution of ethnicity and the number of primary program units completed. Data analysis was performed using HLM 7.01 student version statistical program, also referred to as random coefficient model, mixed model or multilevel model (Raudenbush & Bryk, 2002). When comparing scores on the same measure collected from the same person on several occasions, it is expected that scores will be highly correlated. With HLM, independence was not required because it was violated at each level of the analysis and reduced the likelihood of a type I error.

HLM piecewise growth model examined within individual differences (Level 1) as well as modeled intercepts and slopes as a function of between individual differences (Level 2). A

piecewise growth model can estimate growth trajectories measured within and across individuals and account for variation in the self-care (SCVAR) and mental health (MHVAR) outcomes. This type of modeling can demonstrate if there is a trend in score over time, if groups have an effect on the trend, and if there is a pattern to the change indicating a relationship between these variables (Garson, 2014). Unlike the traditional repeated measures analysis of variance (ANOVA), HLM does not delete cases from the analysis because of missing time points, therefore, does not reduce sample size (Singer & Willett, 2003).

Level 1 Predictors

The Level-1 predictor variables for *time* were used to capture repeated measures over time for treatment as usual (TAU) and intervention (INTV) with the three time points recoded into two dummy variables (McCoach & Kaniskan, 2010). A code for time = 1 is baseline, a code for time = 2 is pretest, and a code for time = 3 is posttest. The first time segment was treatment as usual (coded 0, 0, and 1) that represents the linear growth during baseline to pre-test time segment. The second time segment for the intervention (coded 0, 1, and 2) represents the growth slope of the booster intervention. When time is coded in this way, the parameter captures how much between-person variability exists in terms of where each person starts. The value with a sum equal to “1” signifies treatment as usual and a value with a sum equal to “2” denotes the booster intervention. Each time segment indicates the correlation between individuals’ initial scores (intercepts) and their growth rates (slopes). The time variable, predictors of the self-care outcome variable, designates “the within-person structure can be both heteroscedastic and correlated over time” (Garson, 2013, p. 250).

Level 2 Predictors

The level-2 predictor variables contained information about compositional and contextual factors. Age, education, and group membership were removed because they did not contribute to the model and had non-significant effects as predictors for either self-care (SC) outcomes or mental health (MH) status. The number of individuals in each group who completed four units of the primary program (FOURS) and the number of individuals in each group with severe degree of self-reported difficulty with mental health symptoms (*SEV_MH*) both significantly influenced self-care behaviors measures, therefore, were retained as level 2 predictors. Baseline and pretest scores for self-care and mental health were also retained as level 2 predictors.

The mental health subscale for self-harm in the BASIS-24 instrument consisted of only two items, question 11 (“think of ending your life”) and question 20 (“think about hurting yourself”). Scores showed 90% (18 out of 20) of the participants had scores for self-harm equal to zero indicating “no difficulty with self-harm thoughts”. Based on a review of the literature concerning the prevalence of self-harm behaviors in prison and on a discussion among the research team that near to release offenders will withhold feelings of self-harm because it may interfere with their release date, the decision was made not to retain the self-harm subscale in the mental health variable.

Centering of variables was based on the researcher’s interest in the individual’s performance and the recognition that group effects can impact the results or be a “nuisance factor”. Centering can improve the interpretability of the coefficients and reduce multicollinearity (Garson, 2013, p. 38). Grand mean centering reduces correlation across groups and reflects the group average. If the value of zero for a predictor is not meaningful, the intercept will lack meaningful interpretation and the estimate may lack precision. When these conditions exist, centering is advisable (Hoffman & Gavin, 1998).

After data were entered, the first step to creating the HLM model was the null model using self-care as the outcome measure (SCVAR) with no covariates to assess the degree of between group variance (Garson, 2014). The null model is similar to random effects ANOVA. The intercept was significant ($p < 0.001$) and the Intra-Class Correlation coefficient (ICC) was 0.70322 suggesting that about 70% of the variance in self-care scores can be explained by the differences between groups. The result of this unconditional model follows:

Final estimation of variance components

Random Effect	Standard Deviation	Variance Component	<i>d.f.</i>	χ^2	<i>p</i> -value
INTRCPT1, u_0	17.67177	312.29152	19	154.09196	<0.001
level-1, r	11.47897	131.76667			

Figure 1: Unconditional Model

The Final Model

Level 1 data were repeated observations obtained at three time points for each participant predicted as two time segments for treatment as usual (Time 1_TAU) and the booster intervention (Time 2_INTV). Both time segments, when added to the null model as predictor variables, were significant at the $p < 0.05$ statistical level. Level 2 data consisted of compositional and contextual factors. These included baseline scores (*MHT1, SCT1*), pretest scores (*MHT2, SCT2*), number of completed SN units (*FOURS*) and severity of self-reported mental health difficulties (*SEV_MH*). Age, education, and group membership were deemed non-significant as predictor variables and removed from the final model. The institutional level was not considered as a level of statistical analysis since all female offenders reside in one correctional institution. The limited sample size did not allow for a three-level model to be analyzed. When mental health was the outcome variable, an individual’s self-care was not significant for treatment as usual ($b = 0.09$, $SD = 0.12$, $t = 0.72$, $df = 36$, $p = 0.478$) or for the

intervention ($b = -0.13$, $SD = 0.07$, $t = -1.83$, $df = 36$, $p = 0.074$) in predicting change in mental health status, so self-care was kept as the explanatory variable for the final model.

The resultant HLM 2 fixed effects model with self-care as the outcome variable is shown below:

Level-1 Model

$$SCVAR_{ti} = \pi_{0i} + \pi_{1i}*(Time\ 1_{ti}) + \pi_{2i}*(Time\ 2_{ti}) + e_{ti}$$

Level-2 Model

$$\pi_{0i} = \beta_{00} + \beta_{01}*(FOURS_i) + \beta_{02}*(SEV_MH_i) + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}*(MHT1_i) + \beta_{12}*(SCT1_i)$$

$$\pi_{2i} = \beta_{20} + \beta_{21}*(MHT2_i) + \beta_{22}*(SCT2_i)$$

Results

Demographics

Descriptive statistics provided the following summary of the sample. All participants were females with a mean age of 37.5 years. The sample ethnicity consisted of 20% Black ($n=4$), 65% Caucasian ($n=13$), 10% Latino/Hispanic ($n=2$), and 5% of Mixed ethnicity ($n=1$). In terms of education, 5% completed college, 21% completed high school and 42% completed one to two years of college while 16% had less than three years of high school and 16% had earned a GED. Most of the participants were single (55%) or were married (25%) while 5% were divorced, 10% were separated and 5% had significant others. A total of 40% of the participants completed all the primary program units while 60% had completed three primary program units.

Hypothesis Testing

The research question was: “What is the effect of a booster treatment intervention on self-care behaviors and mental health status for offenders preparing for community reentry?” HLM was used to test the hypothesis that the booster intervention would have a significant effect on self-care behaviors and maintain mental health symptoms for offenders. As was hypothesized, the

booster intervention significantly influenced self-care behaviors showing an improvement after the booster ($b = 8.75$, $SD = 3.15$, $t = 2.76$, $df = 34$, $p = 0.009$) intervention. There was a diminished treatment effect on self-care behaviors and on the status of mental health during treatment as usual (TAU). Self-care scores across individuals declined by 0.34 points from time 1 (baseline) to time 2 (pretest) and then improved after the intervention by 0.34 from time 2 (pretest) to time 3 (posttest). The same pattern was evident with mental health status that declined by 8.59 points from time 1 (baseline) to time 2 (pretest) and improved after the intervention by 6.82 points from time 2 (pretest) to time 3 (posttest). Interpretation of this result can be tenuous, as many factors may have influenced the outcome. Figure 1 below shows treatment regression in self-care behaviors from baseline (Time 1) to pretest (Time 2) that represents the treatment as usual and then improvement in self-care behaviors after the booster intervention (Time 2 to Time 3).

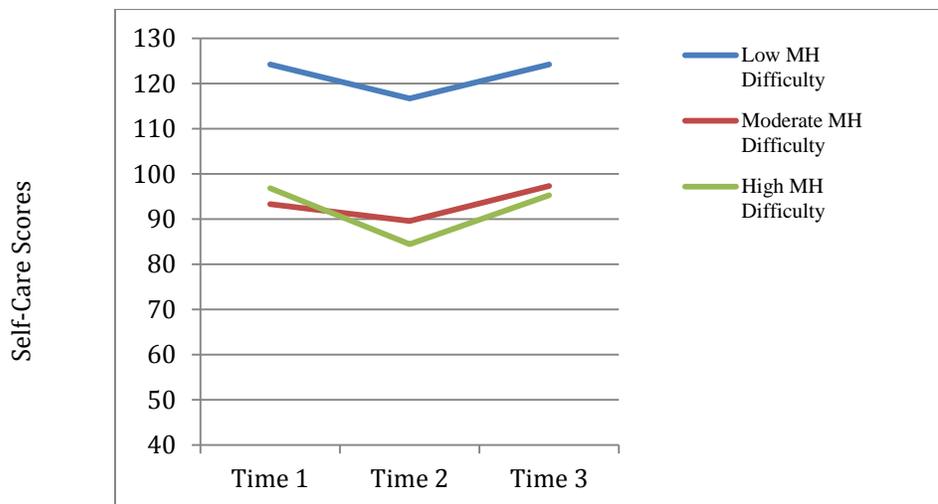


Figure 2: Self-Care Outcomes at each Time Point

Treatment regression may have been influenced by the research design that employed a two-week wait period before beginning the intervention so participants can serve as their own control. The initial contact with the primary investigator during recruitment was followed by a

noticeable absence of both the investigator and the intervention for two weeks during which time individuals returned to their routine. Another factor that influences research in correctional settings and effects treatment regression was the frequency of a facility lockdown where the group session could not be held. These lockdowns interrupted the sequential flow of group sessions and had an observable effect on group performance and dynamic. For example, group discussions were difficult to keep on task due to side conversations about the lockdown and happenings in the prison. During the last group, there was a problem finding a room to hold the group session because of rescheduling this meeting due to a lockdown earlier in the week.

Opposite to what was expected, individual's self-care was not significant in predicting a change in mental health status both during treatment as usual ($b = 0.09$, $SD = 0.12$, $t = 0.72$, $df = 36$, $p = 0.478$) and the booster intervention ($b = -0.13$, $SD = 0.07$, $t = -1.84$, $df = 36$, $p = 0.074$). The marginal finding for the intervention period may be an artifact of the booster's effect upon individuals. According to Heiman (2002), volunteers for studies tend to exhibit an increased need for approval, and have a tendency to be less authoritarian and more conforming. Also, those who participate and find the topic particularly interesting are more likely to evaluate the study on a positive level. Individuals who reported high difficulty with mental health symptoms also had lower confidence in self-care behaviors and those with low mental health difficulties reported higher self-care behaviors. However, regardless of the degree of perceived mental health difficulty, self-care behaviors for all groups (low, moderate and high) declined during TAU and then improved after the booster intervention (Figure 3).

In this pilot study, too few (2 out of 20) participants self-reported any difficulty with self-harm thoughts; therefore, any inferences about the self-harm would be inconclusive. According to the correctional literature there are disparate estimates on the prevalence of self-harm

behaviors in prison (Applebaum, Savageau, Trestman, Metzner, & Baillargeon, 2011; Smith & Kaminski, 2011, p. 26). Self-harm behaviors were estimated between 2% to 4% for offenders in the general population, while offenders with mental health disorders, had estimates of 15% self-harm behaviors (Applebaum, Savageau, Trestman, Metzner, & Baillargeon, 2011; Smith & Kaminski, 2011). Department of Justice (DOJ) researchers found that 12% of female offenders self-reported self-harm behaviors (Lord, 2008). This pilot study had similar results to these national estimates with 10% of female offender participants who self-reported self-harm behaviors in this sample. In the absence of any previous study on boosters in correctional settings, a moderate effect size of the booster was anticipated based on the literature of booster interventions examined in educational and psychological literature. Since participants had prior exposure to these skills, it was expected that they would demonstrate more consistency, more proficiency and greater confidence in using self-care behaviors and coping skills in day-to-day activities and interactions. Using Raudenbush & Bryke's (2002) concept of effect size as the "percent of variance explained" in the Level-2 model ($r^2 = [\tau^2_{\text{null}} - \tau^2_{\text{means}}] / \tau^2_{\text{null}}$), the booster intervention explains 25% of variance in self-care behaviors (p.47).

Discussion

This pilot study provides preliminary support for the effectiveness of a booster intervention in correctional institutions for reinforcing self-care behaviors. This is the first examination of a booster treatment intervention with a correctional population noted in the literature. The overall effects of correctional treatment and rehabilitation programs tend to be small to modest (Cullen & Gendreau, 2000; McGuire, 2002; MacKenzie, 2006); and that was evident in this pilot study as well. The change in self-care behaviors observed was small yet potentially clinically meaningful. Offenders with mental illness may not comply with treatment

(Lamb et al., 2014; Martin et al., 2011) resulting in limited treatment effectiveness. Not only did the booster intervention enhance self-care behaviors, but it also supported adherence to the intervention. One participant was not able to attend due to a unit lockdown and she was not allowed to leave her unit. Days to attend the booster intervention had to be rescheduled due to facility lockdowns and some participants had prior commitments that could not be changed. Only two out of the 20 participants did ask to leave due to emotional stress. Based on their attendance and comments, the four sessions seemed to appeal to participants. It may be useful to consider stabilization of mental health symptoms prior to engaging in a booster intervention to support compliance. Other accommodations such as offering the booster during evening hours so as not to interfere with offender's existing treatment program, work schedule and visiting hours; and providing a location for the intervention was away from distracting events had a positive effect on the satisfactory comments offenders shared with the primary investigator and contributed to the lack of attrition.

This pilot study helps to identify ways in which the booster intervention can be improved. First, addressing some of the barriers encountered with implementing this pilot study. Access to the offender participants was allowed only through a clinician who acted as the primary investigators liaison and often proved to be difficult causing interference with the research design and long delays between recruitment. Direct access for recruitment would improve study outcomes. Institutional factors unique to the correctional setting such as lockdowns, room cancellations where the intervention would be held, late starting due to evening count, and escort status as a visitor nurse researcher all were factors that interrupted the research design. This led greater than the prescribed two-week break between recruitment and the booster intervention and lengthened the research timeline. These are important issues to address in future studies. To

address issues such as these, scheduling frequent conversations between the treatment team and research team will streamline and improve this cumbersome process.

According to Morgan et al., (2012) significant treatment gains that begin during incarceration and that continue with treatment services provided in the community are more likely to improve recidivism (p. 47). A future study would be testing this booster in the community in correctional halfway houses for offenders with mental illness who were just released from prison. The benefit would be to encourage continued involvement in treatment, review and strengthen self-care behaviors when needed the most and avert treatment regression. This also allows for practice of self-care skills as offenders are transitioning back home.

Limitations

This study had several limitations. First, the sample size was small, which limited the complexity of the HLM model, specifically not being able to examine another level of dependency with all variables (Garson, 2013). Age, education and group membership were not significant in influencing self-care that may relate to small sample size rather than lack of significance. Second, this study was done with a selected group of motivated offenders based on their involvement in the primary program who matched the inclusion criteria. Motivation may have played a role in level of participation and compliance. Third, the study lacked a true control group for comparison related to the political and programmatic reasons. It is challenging to evaluate the effectiveness of a treatment intervention in correctional settings, as it is rare to have only one treatment in operation at a time. Participants were involved in treatment as usual and could not be blinded to the treatment and knew they would be receiving the intervention. Fourth, conversations within and between group participants that occurred during daily contact in the prison may have influenced the outcome. This is hard to manage in a prison where offenders live

in close quarters and are constantly together and talking. Future studies would benefit from randomization into a control and intervention group. Fifth, the primary researcher made every attempt to adhere to treatment protocol from training, yet skills do improve with experience and may impact the outcome. Also responses during interactions occur in context and are natural human interactions that can be a limitation. How individuals and groups interact with the primary researcher can affect different outcomes. Finally, there are few instruments specific to correctional settings. The surveys used were another limitation in this study because these surveys had not been tested in the correctional setting. Questions need to be applicable to life in prison to accurately measure the desired outcome. Also relying entirely on offenders self-report of change that occurred during each phase of the study is a limitation. Surveys are very prone to contain volunteer bias. Those who are willing to volunteer tend to have a particular attitude or characteristics (e.g., motivation) versus those who are not willing to participate (e.g., bored) (Heiman, 2002). The more motivated participants are the better their responses to the questions to satisfy the investigator (Chang & Krosnick, 2009). Future studies would want to modify questionnaires and then test these instruments for validity and reliability with the corrections population.

Conclusion

Despite the limitations of this pilot study, results do indicate that a booster intervention for offenders with mental illness in the prison setting can be significant for enhancing learned behaviors, practicing new skills and promoting treatment adherence. It is important to apply evidence-based correctional treatment programming to offenders with mental illness and evaluate the effectiveness (Skeem, Manchak & Peterson, 2011). The significance of this research study is its exploration of a booster program uniquely situated within the correctional system to bolster

the reentry process for offenders. One benefit of a booster intervention, as seen from this study is compliance to treatment interventions. The brevity of the intervention and treatment characteristics previously mentioned were positive elements of the booster. In conclusion, this supports further development and testing of the use of booster interventions in this setting.

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Table 1: Final Model

Results of across group analysis: Self-Care (dependent variable)

<u>Independent Variables</u>	<u>Coefficient</u>	<u>SE</u>	<u>t-ratio</u>	<u>p-value</u>
Intercept slope _ TAU	-16.65	5.46	-3.05	0.004
Mental Health _ baseline	- 8.59	7.62	-1.13	0.267
Self-Care _ baseline	- 0.34	0.17	-2.04	0.050
Intercept slope _ Booster	8.75	3.15	2.78	0.009
Mental Health _ pretest	6.82	4.97	1.37	0.179
Self-Care _ pretest	0.34	0.10	3.31	0.002

Chapter Five: Conclusion and Recommendations

This chapter a review of the three article's research findings, which provides an overview of the pilot study and results; a conclusion section containing a discussion of the findings for the study hypothesis; and a recommendations section, which provides implications for treatment interventions for offenders with mental health illness and for further research.

Review of Findings

This study began with an appraisal of three current systematic reviews in the literature on the types and effectiveness of treatment interventions for incarcerated persons with mental illness (Fontanarosa et al., 2013; Martin et al., 2011; Morgan et al., 2011). The review of literature revealed that interventions such as cognitive behavioral therapy, anger management, individual and/or group therapy, problem solving, social skills training, psychoeducation, pharmacological therapy, integrated dual diagnosis therapy and discharge planning were effective in improving mental health symptoms. Cognitive behavioral therapy approaches were most effective when combined with treatment strategies such as homework assignments, voluntary status, and open door policy to yield greater effect size. However, making any comparative analysis is difficult due to the fact that there are a variety of mental health outcome measures used across the studies analyzed. Based on these results, authors concluded there is a need for more comparative trials to further investigate the effectiveness of specific treatments. This literature review showed that a booster intervention had not been implemented or evaluated in a correctional institution setting.

Rigorous review of the challenges and barriers of conducting research in the correctional setting led to identification of strategies recommended by correctional nurse researchers (Apa et al, 2012; Byrne, 2005; Ferszt & Hickey, 2011, 2013; Wakai, Shelton, Trestman, & Kesten,

2009). Disseminating this knowledge is helpful for nurses who are interested in pursuing research in this distinctive environment) to address these barriers. Were implemented in this pilot study. Challenges did persist, however, with recruitment being the most difficult research activity encountered with this project. Additionally, environmental constraints and unanticipated events such as facility lockdowns and offender movement from one unit to another were barriers to facilitating group sessions in a timely fashion. Future recommendations to reduce these persistent barriers included: (1) identifying specific individuals from the Department of Correction and the University or any other entity involved in a research project to manage and oversee the entire process, (2) develop collegial relationships between all entities involved in correctional research, (3) demonstrate the value of the research projects to ultimately benefit the overall physical, mental and social wellbeing of the incarcerated population, and (4) disseminate the results.

The purpose of this pilot study was to examine the effectiveness of a booster intervention that is a shortened version of an evidence-based intensive 32-session treatment intervention, START NOW (SN), for offenders with mental health problems in a state correctional institution. This four-session booster treatment intervention encompassed the four main units of the primary SN program.

This study examined two health related outcome variables: (1) self-care behavioral skills, and (2) mental health and substance abuse symptom management. The booster intervention study sampled 20 female offenders at a state Department of Corrections institution who were selected based on meeting criteria: involvement in the primary SN, 18 years and older, English speaking, and release within 18 months. At the time of recruitment, consenting participants who

volunteered to partake in the study were placed in a group consisting of five members. There were a total of four groups involved in this study.

The results of this pilot study supported the benefit of a booster treatment intervention for improving and strengthening self-care behaviors. Demographic data were entered into an EXCEL spreadsheet that was later analyzed using the Statistical Package for the Social Sciences version 21 (SPSS). Hierarchical Linear Modeling version 7 (HLM) was the statistical technique used to analyze data related to the specific outcomes of self-care behaviors and mental health symptoms at three time points in order to evaluate the relative effectiveness of the booster treatment intervention in improving self-care behaviors mental health symptoms. Both individual changes and group differences over time were examined enabling a form of growth curve modeling for clustered (multilevel) data; in this case observations nested within persons (Raudenbush, Bryk, Cheong & Congdon, 2004, p. 7).

As a result of a two level HLM model, there was support for the hypothesis that the booster intervention was effective for increasing self-care behaviors. The results showed a positive and significant effect ($b = 8.75$, $SD = 3.15$, $t = 2.76$, $df = 34$, $p = 0.009$) on self-care outcome behaviors after the booster intervention. However, during the treatment as usual time phase, there was a negative or downward significant correlation ($b = -16.65$, $SD = 5.46$, $t = -3.05$, $df = 34$, $p = 0.004$) indicating that individuals declined in their self-care behaviors from their baseline functioning. When a second model examined mental health as the outcome variable, individual's self-care was not significant during treatment as usual ($b = 0.09$, $SD = 0.12$, $t = 0.72$, $p = 0.478$) and with the booster intervention ($b = -0.13$, $SD = 0.07$, $t = -1.84$, $p = 0.074$) in predicting change in mental health status. Thus there was no support for the hypothesis that changes in mental health status resulted from changes in self-care.

Participants shared anecdotal information about their perceptions of this booster intervention. Some comments included liking “fewer sessions,” and preferring “smaller group” for sharing and supporting each other. Other comments endorsed the importance of repeated learning such as “used journaling this week so I wouldn’t explode” and “didn’t get angry on the phone because made myself breathe.”

Conclusions

The benefit of a booster intervention for offenders with mental illness in the correctional setting was found to be significant for strengthening learned behaviors, practicing coping skills and promoting treatment observance. There is a need for treatment interventions that promote the physical, psychological and social health and wellbeing of offenders with mental illness as well as support their transition back to their respective communities (Bewley & Morgan, 2011; Brandt, 2012; Draine & Herman, 2007; Ruddell, 2006; Steadman, Osher, Robbins, Case & Samuels, 2009). The finding in this pilot study adds to the literature on treatment interventions and their effectiveness (Fontanarosa et al., 2013; Martin et al., 2011; Skeem, Manchak & Peterson, 2011) for offenders with mental illness in several ways.

First, the booster intervention showed a positive and small effect, for improving self-care behaviors although lacked a significant effect for mental health outcomes similar to Morgan et al.’s (2011) meta-analytic review. Additionally, the anecdotal information from this study supports what Morgan and colleagues (2011) shared about treatment interventions that targeted mental health outcomes being clinically significant in reducing symptoms of distress, improving ability to cope with problems, and resulting in improved behavioral functioning for offenders with mental illness (p. 45). Participants showed a positive benefit from being in the booster intervention and came to group sessions prepared to work. This booster intervention also shows

backing for the use of homework and practicing self-care skills as elements of an intervention that supports positive effects.

Second, although booster sessions have been investigated in a wide range of treatment interventions such as assertiveness training (Baggs & Spence, 1990), motivational interviewing (Scott et al. 2011; Sussman, Sun, Rohrback & Spruijt-Metz, 2012), and cognitive training (Baker & Wilson, 1985) a booster treatment intervention that has not been implemented or tested in the correctional setting. This study adds to the current literature on treatment effectiveness for offenders with mental illness by implementing and testing the effectiveness of a booster intervention in a correctional setting.

Third, this study supplements the literature on transitional services for offenders who are reentering society. The transition or reintegration often requires that offenders rediscover self-care skills, coping skills and problem solving skills that are necessary for successful adjustment to community living (Shelton et al, 2010). Transitional services are important for offenders who have grown dependent upon the prison institution and ideally should begin when a person is incarcerated (Draine & Herman, 2007). The booster treatment intervention took place while offenders were still incarcerated and did show to be effective by reinforcing and strengthening behaviors and skills important for returning to community and independent living.

Recommendations

Given that this was a pilot study to explore a novel treatment intervention; additional research is needed to test the feasibility of a booster intervention on a larger scale with a larger sample size. There is existing literature on the need for gender-specific correctional treatment programming (Leenerts, 2003; McPhail, Falvo & Burker, 2012; White, 2012). Although this study did involve only female offenders, the issue of gender was not a focal point but could be part of

future studies to determine if gender did influence the outcomes by testing in both male and female correctional facilities. Additionally, including several correctional institutions may yield different as this study took place in a single correctional institution.

Future studies could also expand the booster intervention as part of transitional services offered to offenders in the community such as in correctional halfway houses that serve to link released offenders with services in the community. Similar sampling characteristics would be necessary such as involvement in the primary SN program and treatment approach would be necessary for comparative analysis to take place.

Since mental health outcomes were not significant in this small sample, a future study could use a mixed methods approach and include in-depth interviews after the booster intervention to obtain qualitative data that can better capture the clinical significance of the intervention and the offender's experience.

Implications

Research Implications

There are several meta-analytical reviews that have synthesized the literature on the effectiveness of treatment interventions for offenders with mental illness on criminogenic outcomes and mental health outcomes, and the results of this pilot study shared some similar results as other research with regards to the small to moderate effectiveness of interventions. What is distinctive about this pilot study is that treatment interventions have not implemented nor examined a booster treatment intervention with a correctional population. This type of intervention is an innovative and novel approach to for offenders in regards to rehabilitation and reentry research. Additionally, these meta-analytic reviews typically focus on recidivism and mental health outcomes while this study specifically looked at self-care behavioral outcomes.

This study could serve as a starting point for investigating if booster treatment interventions with offenders both when incarcerated or in the community such as halfway houses. Utilizing a larger sample size, including both genders and comparing correctional institutions would further advance the investigation on boosters with correctional populations and on the topic of treatment interventions for offenders in general.

Clinical Implications

The existing literature cautiously suggests that treatment interventions for offenders with mental illness are effective and beneficial in reducing mental health and criminal symptom. With the potential for early releases, transfers between correctional facilities, court dates or early parole, lengthy treatment programs can be interrupted and not completed. A booster intervention is a feasible, cost-effective and practical treatment intervention for fortifying learned skills, strengthening behavioral changes and minimizing offenders prematurely leaving programs due to the brevity of booster interventions. As a booster intervention when small changes are realized, these small changes can have a large impact on the health and quality of life for offenders.

Theoretical Implications

The result of learned dependency upon the prison environment is a loss of self-care skills, loss of community-based coping and other survival skills necessary for functioning independently in the community (Shelton, Barta & Anderson, 2010). The Rediscovery of Self-Care (RSC) Model, that emphasizes emotional self-regulation, problem solving, goal setting and coping skills, provides the structure critical to prepare offenders to assume personal responsibility and independence for a quality life outside prison. This model served as the framework for the booster intervention. The four-session booster intervention used the key elements of the RSC model by encouraging offenders to explore connections between situations

and emotional responses, to practice ways to deal adaptively to stressful events and to set future goals to strive to achieve outside the prison environment.

Summary

This study found that a booster intervention was favorable in strengthening self-care behaviors for offenders with mental health problems and promoting preparation for release to the community. This pilot serves as a foundation for research in the use of booster interventions in correctional facilities to reinforce treatment gains using evidence-based therapies.

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