

Motivational Interviewing Intervention and Recidivism in Lifetime Imprisoned Inmates: An Experimental Study

Atif Rasool¹, Shirmeen Ijaz², Saira Majid³, Ayesha Zafar⁴ & Amjad Rasool⁵

¹Department of Clinical Psychology, Riphah International University Lahore Email: atifrasool48@gmail.com

²Department of Clinical Psychology, Riphah International University Lahore Email: shirmeen.ijaz@riphah.edu.pk

³Department Clinical Psychology, Superior University Lahore, Pakistan Email: sairamajid@superior.edu.pk

⁴Department of Clinical Psychology, Superior Universality Lahore, Pakistan. Email: Ayesha.zafar@superior.edu.pk

⁵ Department of Sociology, Bahauddin Zakariya University, Multan, Pakistan. Email: aworred@hotmail.com

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Corresponding Author:

Atif Rasool

Email:

atifrasool48@gmail.com

ABSTRACT

The research aimed to find out the effects of a motivational interviewing intervention on the recidivist behavior of imprisoned inmates. The study followed a qualitative approach, and a quasi-experimental design was used. The sample was selected based on inclusion and exclusion criteria from Kot Lakhpat Jail, Lahore, and Central Jail, Sahiwal. A self-appraisal questionnaire (SAQ) was used to collect information from six male respondents (n=6) who had been imprisoned for their entire lives. The data was gathered through eight sessions periodically conducted with each respondent. The data was analyzed on SPSS, and the Wilcoxon Signed-Rank test was used for data analysis. The study findings show a significant positive effect of a motivational intervention on recidivist and antisocial behaviors. It is proposed that motivational interviewing can be promulgated as an effective technique to bring positive change among people with recurrent criminal tendencies.



Introduction

In the complex world of criminal justice, one of society's most significant issues is the persistent issue of recidivism among those who are imprisoned. A complicated problem with major the cycle of returning to criminal behavior after release and become incarcerated again is recidivism following the consequences for criminal justice system, the public safety and individuals involved. In this complex setting, lifer offenders provide a special and challenging issue. These individuals, who have received prolonged or permanent jail sentences, must overcome what seem like

insurmountable challenges in order to recover and reintegrate into society. However, a promising tactic known as Motivational Interviewing (MI) has emerged in recent years to address this problem by fostering intrinsic motivation for change in convicts. The significance of recidivism among lifers is explored in this introduction.

Lifetime Imprisonment

Lifetime imprisonment is a form of punishment that involves the incarceration of an individual for the remainder of their life, with no possibility of parole. In recent years, there has been growing debate and criticism surrounding the use of this punishment in many countries around the world. The Pakistan Penal Code (PPC) specifies ten different forms of punishment; however the courts almost always use the straightforward, stringent guidelines for determining and judging death penalties. The PPC recognizes that the death penalty is a serious option. Still, it also says that "life imprisonment" "Minus Est Semper Eligendum, De Duobus Malis" the minor must always be chosen (Shaheen & Khadam, 2022).

Life imprisonment is a prevalent kind of punishment in Pakistan for serious offenses such as drug trafficking, murder, and terrorism. Nonetheless, there has been some discussion and opposition to the nation's usage of life in prison. One problem is the possibility of false accusations leading to life sentences for innocent individuals. Such convictions are frequently the result of inadequate investigation, feeble prosecution, and inadequate legal assistance Lal et al., (2023). In addition, due to Pakistan's convoluted and lengthy legal system, people may spend years behind bars without being allowed to defend themselves, which violates their fundamental human rights. Pakistani jails are also overcrowded and poorly maintained. Prisoners are routinely abused both physically and mentally, and the facilities and resources in the jails are frequently insufficient and overcrowded Aamer et al., (2023)). These circumstances can violate prisoners' fundamental human rights, and negatively influence and affect their bodily and mental well-being Ward et al., (2007).

Recidivism: The phrase refers to a person's propensity to commit new crimes or re-offend after being released from jail or other types of correctional supervision. Travis (2013). The idea of recidivism is crucial to the study of criminal justice because it can guide the development of programs and policies meant to lower crime rates and facilitate the constructive reintegration of lawbreakers back into society. The term "recidivism" refers to an offender who has been released from custody engaging in criminal activities once again Gendreau et al., (1999). Recidivism rates are still high in many nations, including the United States, notwithstanding these measures Belet et al., (2020). The U.S.'s high imprisonment rate in comparison to other nations is one factor in this. With nearly 2 million people now incarcerated or detained, USA has highest imprisonment rates in the world "The Sentencing Project" (2022). Recidivism is impacted by a number of systemic and legal elements in addition to these the duration of a sentence Gottfriend et al., (2017), the possibility of parole or probation, and the standard of community monitoring, for instance, all have an impact on how likely a person is to commit another crime risk factors for recidivism continue to rise as a result of prisoners' unequal access to community-based resources among state inmates who have been freed, recidivism is a regular issue Loeffler et al., (2022); Berger et al., (2022) Wallace et al., (2020). Yet, mental illness is typically diagnosed in repeat offenders Albarbari et al., (2021). In jail, criminals self-report having mental health problems, according to the literature. In addition, the study revealed that 10.2% of offenders self-rated sadness and 3.6% self-rated psychosis Carpio et al., (2020), recurrent offences were defined as convictions for crimes after being released, omitting allegations of parole violations that led to first imprisonment revocation Vipond, R. (2023).

The chance of recidivism is influenced by a number of circumstances, since former offenders frequently return to unemployment, poverty, and crime Baranyi (2019). One of the difficulties faced by ex-offenders is the requirement for a vocational degree in order to be hired McClelland et al., (2023). To interrupt the cycle of recidivism, ex-offenders must be able to find jobs and get support from their families Forsyth et al., (2023). The cost of providing mental health services to criminals in prisons and detention facilities is high for instance Wu et al., (2023). The criminal justice system, corrections officials are educated to uphold discipline in the prison system rather than treat prisoners for mental illness. So, cutting back on government funding for prisons increases safety (Biafri 2023; Poudel, P. 2023).

Motivational interviewing (MI) is an evidence-based intercession utilized in a number of disciplines, such as criminal justice, drug treatment, and healthcare. It was created in the 1980s as a person-centered strategy Miller (2001; 1991), help people who exhibit ambivalent or resistant behaviours towards a certain issue change. Through the investigation and pledge of an individual's doubt towards behaviors change, MI aims to elicit intrinsic motivation and fortify their commitment to change. This essay will go over MI intervention's guiding ideas, methods, and applications in several fields Miller & Rollnick (2001).

Effectiveness of MI Intervention: MI has been extensively studied and found to be effective in various fields. In healthcare, to improve medication adherence, smoking cessation, weight loss, and diabetes self-management Lundahl et al., (2013). In addiction treatment, it reduces substance use and improve treatment retention Hettema et al., (2005). MI helps to reduced recidivism and improve compliance with probation Austin et al., (2011). The application of MI is guided by four main concepts, each of which builds upon and brings to life the MI's constituent parts "style." Throughout treatment, the MI-using therapist will adhere to these principles (Rollnick, 1995).

Rationale: This study focused on discovering the impact of motivational interviewing as an intervention on the level of recidivism among lifetime imprisoned inmates. The focus here was to reduce the level of recidivism by utilizing MI as an effective intervention as a result of which the life time imprisoned inmates could relieve their lives as normal civilians instead of dwelling in the world of crimes. The results revealed that the vicious cycle of recidivism was hence broken.

Significance of the study: The importance of the experimental study lies in its potential to contribute to the development of effective rehabilitation programs for lifetime imprisoned inmates, which could ultimately promote public safety and reduce criminal behavior. This research sought to assess the success of Motivational Interviewing (MI) intervention in reducing recidivism among lifetime inmates. This was important because lifetime inmates faced significant barriers to successful reintegration into society, and traditional rehabilitation programs had limited effectiveness in reducing recidivism among this population. In correctional facilities, if MI intervention shows significant promise in terms of behavior change along with encouragement and decrease in recidivism among lifelong convicts, it could be implemented. For convicted criminals, the research outcomes may enhance the wider body of knowledge about efficacious rehabilitation initiatives. On the relative efficacy of MI intervention and other rehab programs, the results of this current study provided insight. Further investigations into evidence-based strategies for reducing recidivism and promoting successful reintegration into society through encouragement of criminal offenders through informed research.

Study Objective

To explore how Motivational Interviewing MI interventions impact recidivism among lifelong prisoners.

Research Question

Does the use of Motivational Interviewing MI as an intervention notably reduces the rate of recidivism among lifetime captives.

Literature Review

In Pakistan, the idea of life in jail is a contentious one. The death sentence is the harshest punishment allowed by the Pakistan Penal Code (PPC), yet there are concerns regarding the terms and length of life in prison Shaheen et al., (2022). There are several problems with Pakistan's criminal justice system, one of which is how inmates are treated. Before and after being found guilty, female prisoners frequently endure mistreatment, coercion, and sexual assault Jabeen, (2022). Human rights organizations are worried that Pakistan's disjointed legal and prison systems could not provide the accused with a fair trial and due process Ali et al., (2017). The Pakistani government must attend to the particular requirements of female inmates, including their availability to appropriate medical treatment, sustenance, The Pakistani government must attend to the particular requirements of female inmates, including dietary needs, access to appropriate medical treatment, and psychological assistance Smit et al., (2019). The death penalty must be put back on hold, and the appalling conditions inside the jail system must be looked into Roehrkasse et al., (2022).

Shuja (2022) found that with many fugitives committing crimes again after getting released from prison, Pakistan is experiencing a sharp rise in the number of people without any understanding of the psychological effects or recidivism that may result from this. The current study aims to develop a hypothesis regarding the environmental and social elements in support of recidivism as well as the psychological implications for recidivist ex-convicts in the nation. In the current study, which included a sample of 20 ex-convicts' recidivist collection before analysis and investigation, a theoretical sampling technique was applied. To identify the social, environmental, and psychological effects of the current study, a grounded theory technique was adopted. The semi-structured interview was adopted for data gathering and interview transcripts in three stages were coded including open, selective and axial coding of detailed testimonies of the social and environmental factors provided by those who contributed to recidivism; three main causes were identified, namely negative social experiences, societal hostility, and a hostile environment. Negative social experiences were the outcome of multiple psychological problems. New information on the concept of recidivism was discovered as a result of the absence of theoretical conceptions that were previously in place about recidivism in Pakistan. Owing to the dearth of study data on the subject, there are currently no intervention programs in Pakistan; nonetheless, these found antecedents may be helpful in developing new ones.

Bhutta (2022) discovered the theoretical mechanisms and links through which criminal behavior and religiosity are interrelated although empirical data suggestions are still being under discussion. The Muslim Personality Religiosity Inventory was given to low- risk Pakistani Probationers and evaluated factors, recidivism was tracked later. Five oblique variables were connected but two

were not. Probationer recidivism in logistic regression was predicted by Religious-Moral Values and Religious Practices.

Memon (2022) found the significance and rationale of Criminal, a program available worldwide in jails including Karachi Central Prison study was conducted that investigated the program which revealed data collected through press reports, websites and articles. It found recidivism rates internationally and in Karachi Central Prison which revealed that Criminal is updating Karachi's old prison system by exonerating convicts. Habitual and aggressive offenders can be rehabilitated and eventually reintegrated, and a lot of lawbreakers have been encouraged to change imprisonment. A positive display in mental health of offenders has been observed in Karachi Central Prison which can be helpful in reducing the criminality, recidivism and prison congestion. To rehabilitate inmates employing Criminal would be useful as depicted through results.

Zgoba (2020) found that mental illness and substance use disorders to recidivism have an important role in policy and clinical implications. Post release data for over ten thousand New Jersey state offenders about 36 months was released and examined which concluded the re-arrest for the ones diagnosed with substance use disorders and mental illness both or neither. They also found certain factors associated with increased likelihood of psychiatric decompensation were linked to higher rates of re-arrest. Inmates who were released and had been diagnosed with a substance use disorder (without mental illness) while had greater rates of re-arrest followed by those who suffered from both mental illnesses and substance abuse.

Awilly (2015) outlined the precise definition of recidivism as an individual's return to criminal activities following a rearrests for fresh offences that result in jail time.

According to Montoya (2009), experts in the subject have carried out several studies and have determined a number of elements, such as demographics, social or cultural factors, and predictive factors that are accountable for recidivism.

Numerous political and economic variables have impacted the reduction of prisons (Phelps, 2016; Pickett, 2016; Turner et al., 2015). Supporters of decarceration assert and a growing body of data supports this assertion—that community-based supervision, as opposed to jails, is more effective in reducing recidivism (Cullen et al., 2011; Petrich et al., 2021; Villettaz et al., 2014).

METHOD: To find out the effect of motivational interviewing on recidivism among lifetime imprisoned inmates. This study was consisting of three phases to see the effects of motivational interviewing on recidivism in lifetime imprisoned inmate. Phase 1: pre assessment of recidivism, Phase 2: Implementation of the motivational interviewing and Phase 3: Post-assessment to determine the effect of motivational interviewing.

Phase I

Sample: The sample of the study was taken from the Kot-Lakhpur and Sahiwal Center Jail. It consisted of six participants based on similar crimes in which they killed their family members and after trial, they were sentenced to life time imprisonment quasi-experimental design Purposive sampling technique was used for sample selection. Demographics are age, education, family system, **0xclusion Criterion**

- Only male subject was part of the study
- The contributors have murdered two or more individuals in the past few years before jail

- The participants tending recidivism shall be included
- The participants sentenced to lifetime imprisonment shall be added
- The participants must have spent 5 or more years in imprisonment
- Inmates suffering from chronic ailments were excluded from the study.
- Participant with mental health problems wasn't part of the study.

Pre-Assessment: A demographic and self-appraisal questionnaire was used to pre-assess participation. After this, a rapport and trusting connection was built between the subject and the researcher (therapist), which helped to create a comfortable environment. This generally happened in the early part of the first session, which made it simple for the participants to participate in the study.

Assessment Measures: Demographic information about the participants was gathered with this form and information about age, education, family system, time imprisonment, Assassination to murder, and number of murders were documented. Self-assessment questionnaire SAQ; Loza, (2005). The SAQ consists of 72 true and false questions and is an actuarial self-report valuation. Its goal is to forecast both violent and nonviolent recidivism among people who have committed offenses (Mitchell et al, 2012). Seven subscales comprise the assessment, which consists of these 72 items: The following factors are examined: Criminal Tendencies (antisocial attitudes, beliefs, feelings, and behaviors); Antisocial Personality Problems (identifiable features linking with antisocial personality disorder); Conduct Problems (looking at behavioral problems from childhood); Offender's Criminal History; Alcohol and Drug Abuse; and Antisocial Associates. These six subscales can be used to predict recidivist behaviors. Although the Anger subscale measures responses to rage, it is not factored into the final score as of the time of writing. Risk is divided into four categories: low, low-moderate, moderate, high-moderate, and high. Loza, (2018; 2005), the SAQ's Cronbach's alpha coefficient was .96, indicating high internal consistency reliability, reported that the SAQ has content validity based on a panel of experts' review. However, no further information was provided on the construct validity of the SAQ (Loza, 2018).

Phase II:

The intervention strategy was put into action in the study's second phase. With the assistance of a therapist, a counselling protocol was created, 8 sessions were conducted. Subjective Evaluations Defenders were demanded to score their concerns on a scale of 1 to 10, with 1 being a minor issue and 10 denoting a major one (experience severe problem).

Phase III

Intervention in Therapy

Motivational interviewing (MI) is a client-centered approach that aims to reinforce and build up the client's will and dedication to commute (Miller and Rollnick, 2013). Creating a rapport: Building a cooperative and constructive relationship between the therapist and the prisoner is the first stage in MI, according to Arkowitz et al. (2015).

Principles of MI Interventions: The four leading concepts of MI intervention are empathy, inconsistency, rolling against opposition, and support for efficaciousness Dix, H. (2016). Empathy is the capacity to recognize and embrace the client's perspective without criticizing or passing judgment Steindl et al., (2018). The discrepancy is used to highlight the differences between a

client's current behaviors and their objectives Westra et al., (2013). It stimulates change by causing a cognitive dissonance. In order to roll with resistance, one must explore the reasons behind the client's resistance rather than resorting to confrontation, defensiveness, or arguments Tan, (2012). Encouraging the client to believe in their own ability to change and recognizing their autonomy are key components of supporting self-efficacy Hall et al., (2012).

Factors of stress inmates:

Loss of freedom: For lifelong prisoners, this is the most evident source of stress. For the majority of the day, they are confined to a tiny cell with little access to the outside world. Feelings of frustration, rage, and helplessness might result from this lack of control over their surroundings Ansah et al., (2023).

Family and friend separation: Lack of social support affects inmate's psychological well-being which cause of depression and anxiety Handayani et al., (2022).

Fear of victimization and violence: Lifetime offenders are sometimes viewed as easy pickings, and violence can happen at any time in jail. Anxiety and tension can be greatly increased by this ongoing dread of being a victim Drakeford, (2018).

Lack of privacy: Because guards are always keeping an eye on lifetime prisoners, they have very little privacy. Feelings of irritation and rage may result from this invasion of personal space Drakeford, 2018; Johnson, 2017).

Restricted access to medical care: Prisons are frequently overcrowded, and there is little access to healthcare. Long wait times for medical care can be a source of further stress and anxiety for lifelong prisoners Browne et al., (2022).

Future uncertainty: Lifetime prisoners have little chance of ever being released, which breeds pessimism and hopelessness. This future uncertainty can lead to a great deal of worry and anxiety.

Eliciting Change Talks: "Change talk" describes a person's remarks endorsing a change in behaviors. Using questions like "What are some reasons for changing?" and "How important is it for you to change?" will help you initiate change talk. Inmates' drive and dedication to change might be strengthened by eliciting change discourse Miller et al., (2006).

Developing a Plan: Rollnick et al., (2010), Formulating a plan Creating a plan entail working with the person to create a detailed, doable plan for changing their behavior. This method can assist prisoners in overcoming obstacles, locating resources and supports, and making progress towards their objectives and used to enhance the individual's self-efficacy and to promote long-term success Miller et al., (2006).

Psycho-education

This study discovered that psychological educational treatments were successful in lowering juvenile offenders' chance of recidivism who had a history of traumatic childhood events Baglivio et al., (2015). A meta-analysis discovered that prisoner recidivism rates can be decreased by participating in correctional education programs Beaudry et al., (2021), a study found that educational programs like psychoeducation were effective in reducing recidivism rates among

criminals Auty et al., (2017), advantages of psychoeducation programs for detainees with mental health issues are covered in this article, including greater knowledge and self-awareness, enhanced coping mechanisms, and diminished symptoms Walker et al., (2012).

Health Promoting Behaviors

Inmates who are sentenced to life in prison frequently struggle with serious health issues such as chronic illnesses Vasquez, A. E. (2021), mental health issues Maschi et al., (2015), and drug addiction González et al., (2012). These health risks reduced and general well-being Stewart et al., (2022), enhanced by engaging in health-promoting Pulford et al., (2013), activities including physical activity Meek, (2013).

Personal Hygiene: Maintaining cleanliness and health is a daily necessity that requires maintaining personal hygiene. Personal hygiene might be difficult when someone is sentenced to life in jail because of poor facilities and resource availability Hatton et al., (2013). Numerous studies have evaluated the personal hygiene habits of lifelong prisoners. According to research done in Gondar, northwest Ethiopia, 54.3% of prisoners generally followed good personal hygiene practices Garedew et al., (2023). Personal hygiene practices were found to be significantly predicted by variables like apprehension, daily water use, and the number of convicts in each cell. More than two-thirds of prisoners in a Northern Indian jail who participated in another survey revealed that most of them brush their teeth at least once a day. Additionally, it was shown that convicts' adaptive coping skills were associated with their desired dental hygiene behaviors Altaf et al., (2013). According to a study conducted in Benin City, Nigeria, access to oral hygiene supplies, age, and oral hygiene practices were strongly correlated with prisoners' oral hygiene levels Omoigberai et al., (2012).

Stress inmates: Stress is a serious problem that can leave a permanent influence on the mental health and well-being of lifelong prisoners. Research revealed that rates of posttraumatic stress disorder (PTSD), which range from 2.3% to 13%, are greater among federal prison inmates than in the general population Robert, K., Guthrie. (1998). It is crucial to test for child sexual abuse (CSA) in this population because it is a predictive factor for lifetime PTSD in female prisoners Guoping et al., (2008). The COVID-19 outbreak has made prisoners' stress levels even worse, making stress management training and counseling necessary Fitri et al., (2022). Longitudinal research has, however, demonstrated that incarceration for an extended time might enhance adaptability and reduce dysphoric mental states as well as stress-related health issues Edward, Zamble. (1992). It is crucial to understand that elderly prisoners may conceal their stress and resentment, which prevents the creation of coping mechanisms Manuel et al., (1988).

Distraction: Diversion is the practice of taking part in enjoyable activities that help patients cope with the consequences of stress Lowenstein, A. (1984), such as exercising or taking up a hobby Muring et al., (2021).

- To read books
- To Clean Bed Every Day
- To deep breath
- 16- PMR (Progressive Muscle Relaxation Exercise) Leonard et al., (2013).
- To engage in a hobby like gardening, Games (cards, handball, etc.) drawing, etc.
- Physical activities are an effective outlet for the prisoners, for example, walking, handball, work out.

- All the subjects had a problem of sleep issues Dewa et al., (2015), persistent irritability Walker et al., (2003), and anger Suter et al., (2002).

Progressive Muscle Relaxation Exercise: Tensing and relaxing of sixteen muscle groups is what Jacobson originally described as progressive muscle relaxation, or PMR, in 1934. In 1948, Wolp modified the technique to incorporate systematic desensitization, and in 1973, Bernstein and Borkovec examined how to modify it to align with cognitive behavioral stress management. The seven and four muscle groups, memory-based relaxation, recall and counting, and counting are a few of these modifications. The utility of PMR in high-level tension responses and mind-body therapies, such as managing chronic pain in inflammatory arthritis and irritable bowel syndrome, lowering tension headaches, and sleeplessness, and cancer adjuvant treatment, is supported by empirical evidence. This article examines the history of PMR, summarizes recent findings, and explores how McCallie et al., (2006) may affect social work practice.

Mindfulness Meditation: The effectiveness of meditation in improving the mental health and well-being of incarcerated individuals, including those serving life sentences. The study compared a group of long-term participants with a control group to examine the effects of meditation on attention stability. According to this study, meditators improved attention and reduced brain activity associated with mind wandering compared to controls (Lutz et al., 2008). A group of business decision-makers were surveyed on the effects of mindfulness meditation. According to the research, participants who practiced a brief mindfulness meditation before making ethical decisions were likelier to do so than a control group (Ruedy et al., 2010).

Procedure: For a total of eight weeks, participants in the experimental study attended a session once each week. The therapist educated the participants about the goal of the research and the pre and post-assessments after obtaining informed permission and developing rapport with them during the first session. Both deep breathing exercises and personal hygiene advice were provided. The patient was also counseled to practice self-care and self-hygiene. A brief history was obtained at the second session, and subjects gave their verbal agreement to participate in the experiment.

Session Plans for MI

Session 1: Introduction and Rapport Building (Duration: Rapport with the participants. We begin by introducing ourselves and explaining the purpose of the study, emphasizing the confidential nature of the sessions and the ethical guidelines that will be followed. We also provide participants with the informed consent form, explaining the study procedures, potential risks and benefits, and ensuring they fully understand before signing. We converse casually to build rapport since it's important to create a welcoming and encouraging environment. We establish trust by being empathetic, respectful, and sincere with the participants. We also go over the significance of upholding confidentiality, the boundaries of confidentiality in situations where there is a risk to oneself or others, and we establish clear guidelines for the format and objectives of the sessions. SAQ was completed in order to conduct a pre-assessment.

Session 2: Evaluate each participant's unique objectives

The second session was based on probing them with open-ended inquiries to learn more about their objectives, perspectives on the offense, and background in the family. Paraphrasing, summarizing, and reflecting are examples of active listening techniques that we use to show that we are paying attention. We explore how important it is for participants to make positive changes and how

confident they are in their capacity to do so. By engaging in reflective listening, we help children to think about how their behaviors affect both other people and themselves. In addition, we help the participants identify the difference between their behavior and their goals, principles, or dreams, to develop the observation and evaluation of their decisions and their possible consequences.

Session 3: Identifying strength and Resources

Unearthing the resources and strengths of participants is the aim of this session. A strength-based approach is taken: we focus people's attention on their assets. Through attentive listening, we help them uncover instances in which they have successfully confronted challenges or made positive changes in their life, thus highlighting their capacity and potential for change. We also mine for personal assets, such as past achievements, skills, and supportive relationships. We then compile a list of these resources and capabilities with participants to begin problem identification and work on developing plans for change.

Session 4: Exploring Barriers and Resistance: We talk to address their concerns and resistance to change, using open-ended questions to encourage them to share their thoughts and feelings. Addressing confusion is an important part of this process. We welcome participants' feelings about change, showing empathy and understanding. By listening carefully, we carefully examine why they are considering change, and help them weigh the pros and cons of their ongoing behavior and the potential benefits of positive change.

Session 5: Developing a Plan of Action

Based on participants' goals, strengths, and identified barriers, we work together to develop SMART goals—specific, measurable, achievable, relevant, and long-term. We increase their commitment and sense of ownership by allowing them to participate in the goal-setting process. Participants are then encouraged to list specific steps they can take to get closer to their goals. We help clients create realistic timelines and break down their goals into actionable tasks. This course includes problem-solving skills to deal with any obstacles or challenges that may arise when implementing a career plan.

Session 6: Strengthening Commitment and Building Resilience

The sixth phase focuses on strengthening participants' commitment to their goals and developing resilience in the face of adversity. Begin by discussing the participants' progress to date and highlighting any useful developments or revelations they've made along the way. We encourage people to identify and acknowledge the steps they have taken to achieve their goals by sharing their journey so far. We motivate and inspire them by celebrating their accomplishments and achievements. An important part of this event is to determine the level of entrepreneurship of the participant to change. We try to discover your interest and willingness to pursue your goals through open-ended questions. We highlight the importance of sustainability and encourage reflection on its relevance to overcome the obstacles that arise. We help participants identify coping mechanisms, supportive relationships and personal characteristics by discussing the concept of resilience. Realizing their potential gives them the confidence to overcome obstacles or temptations that hinder their progress. We use reflective listening to understand participants' concerns and give them the opportunity to express doubts or fears about meeting their commitments. We work together to face and overcome these worries and concerns, and help them move on their own path.

Session 7: Consolidating Gains and Addressing Relapse

It is important to prepare the participants for the problems and difficulties they will face during the process to reduce the recidivism. It began by reviewing each participant's accomplishments and progress toward their goals. We encourage and empower them by celebrating their achievements and recognizing their efforts to change their behavior. We investigate triggers that may lead to a return to previous behavior patterns to effectively address the risk of relapse. We asked open-ended questions to help participants identify specific events, emotions, or situations that might cause them distress. Knowing these triggers allows us to fill them with more effective methods to overcome these obstacles. Together we created a toolkit of techniques to help individuals manage relapse triggers. When faced with challenges, children are encouraged to explore alternative behaviors, reach out to their communities for help, and engage in self-care. Finally, we help individuals develop a plan to avoid relapse. The plan outlines the steps people should take if they think the disease will recur. We work with them to identify warning signs, create preventative measures, and develop actions to get back on track with their goals, ensuring they have a strong roadmap to not return.

Session 8: Post-Testing and Closure: The meeting focused on post-testing and summarizing the treatment process. Post hoc tests are important for assessing how the intervention affected participants' repeated behaviors. By using post-intervention assessment tools such as the Structured Assessment Questionnaire (SAQ), we hope to assess the extent to which participants' attitudes, beliefs, and behaviors have changed in response to repetition. We make sure they comprehend the questions being asked and explain the assessment's goal. We ask the participant to share their opinions and feelings regarding the process after considering their entire experience with the intervention. We talk about the realizations obtained, difficulties encountered, and tactics used. By providing a space for reflection, we facilitate their self-awareness and encourage them to notice any changes they have noticed in themselves. As the intervention comes to a close, we address the conclusion of the therapeutic relationship and offer closure

Results

Table 1

Frequencies (f), Percentages (%), of demographics characteristics of the participant (N=6)

Characteristics of the participant	f	%
Age	6	
25-32	2	33.3
33-40	4	66.67
Education	6	
Primary	1	16.3
Middle	4	66.67
High	1	16.3
Family System	6	
Joint	4	66.7
Nuclear	2	33.3
Imprisonment Duration	6	

6-10	2	33.33
11-15	4	66.67
Assassinate to Murder	6	
1-5	0	
6-10	6	100
No. of murders		
1-5	4	66.67
6-10	2	33.33

The total sample consisted of (N=6) participants out of which 33.33% were in imprisonment for 6-10 years and 66.67% for 11-15 years. More than half of the participants belonged to the age group of 33-40 years. All the participants rated them assassinate to murder in 6-10 severity. Out of 10, 4 participants committed 1-5 murders and 2 participants committed more than 5 murders.

Wilcoxon Signed Rank Test

Pre and post assessment was done before and after the intervention. The scores on both pre and post level for all subscales were compared through Wilcoxon signed rank test Woolson, (2007).

Table 2

Sub-scales	Pre		Post		Z	p
	M	SD	M	SD		
Criminal Tendencies	9.50	2.25	4.33	2.58	-2.014	.04
Antisocial Personality Problems	8.33	1.50	3.83	2.48	-2.032	.04
Conduct Problems	15.5	3.01	5.33	3.50	-2.207	.02
Offender's criminal history	7.66	1.75	7.66	1.75	-2.200	.01
Alcohol and Drug Abuse	6.50	1.64	2.50	1.04	-2.214	.02
Antisocial Associates	10.16	2.31	5.33	2.06	-2.207	.02
Recidivist behavior	57.66	10.34	38.16	5.41	-2.201	.028

Table 4.3's findings, there was a statistically marked contrast among the intervention group's pre- and post-test scores. This demonstrates that the intercession has a considerable impact on lowering recidivist conduct as a whole. Also, the therapy was successful in lowering behavior issues, criminal and antisocial inclinations, and alcohol and drug misuse.

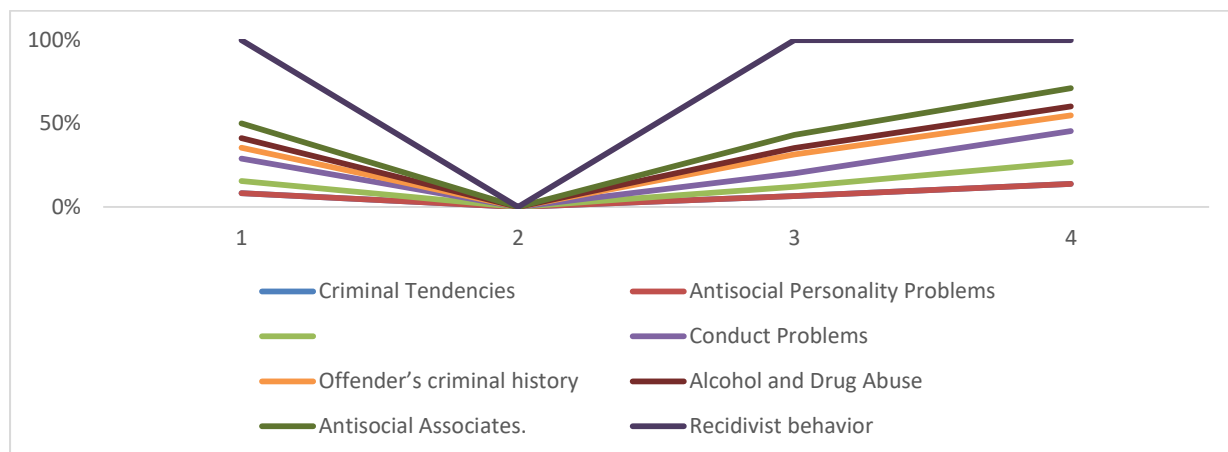


Figure I

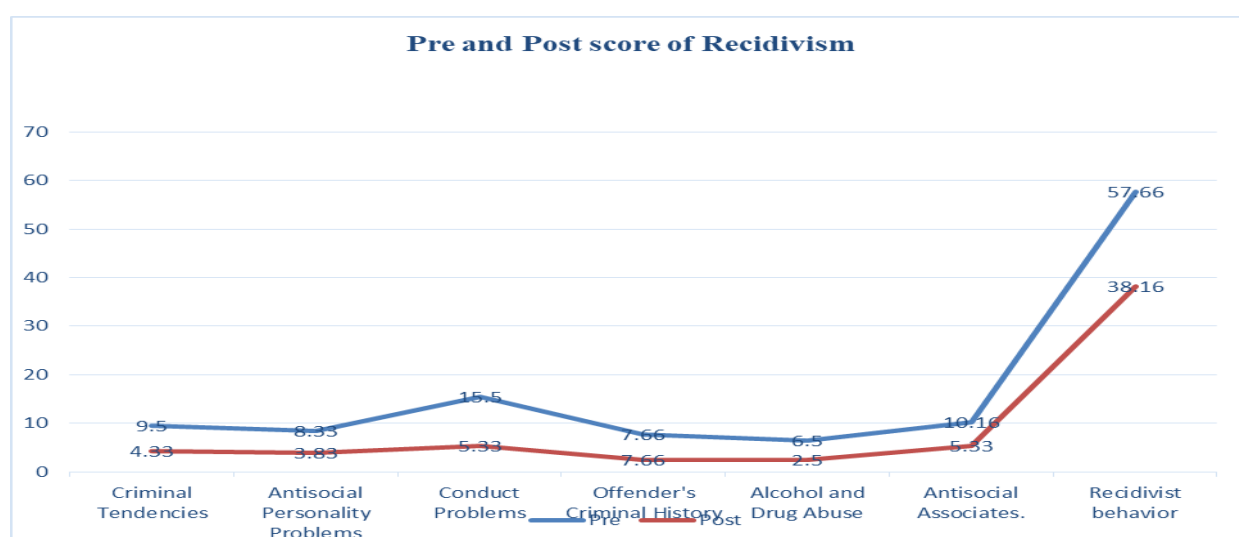


Figure 2

Discussion

This study was designed to understand the effectiveness of motivational interviewing intervention and recidivism in lifetime imprisoned inmates, six subjects were carefully chosen on exclusion and inclusion criteria. The period of intervention was constructed on entire eight sessions; the study indicates a significant improvement in recidivism. The current study on motivational interviewing (MI) is effective in reducing criminal tendencies, antisocial personality problems, and recidivistic behaviors. This section is going to highlight the combination of previous literature and current study findings.

According to the findings of the study, motivational interviewing (MI) can significantly reduce recidivist behaviors. The pre- and post-results of each subscale revealed a statistically significant change, according to the Wilcoxon signed-rank test. The effectiveness of motivational interviewing may be explained by the reality that it represents a client-centered, quasi-strategy that emphasizes the significance of client autonomy and choice. Open-ended questions that focus on listening and gathering are just some of the motivational interviewing techniques used to help clients explore and address their concerns about positive changes in their lives. Incentive inquiry

helps to reduce criminal behavior and related factors by improving consumer motivation and capacity.

The results of this study are consistent with previous research on the effectiveness of motivational interviewing in criminals. To reduce recidivism among the rebels. And young offenders persist in their families Eirik et al., (2021) found a positive relationship between the reduction of older offenders and the number and duration of the MIP period David et al., (2019)). Motivational interviewing is successful in addressing other crime-related problems, such as substance abuse and mental illness, as well as reducing crime and anxiety-related problems Patricia et al., (2018). Motivational interviewing was successful in lowering high-risk drinking among college students Douglas et al., (2019).

Burke et al., (2011), Discovered that MI was successful in addressing issues associated to drug misuse Henggeler et al., (1997) found that dosage (i.e., the number and length of MI sessions) was positively associated with decreased recidivism among adult offenders Charles et al., (2018) found that multisystem therapy, which includes elements of MI, was effective in reducing recidivism among violent and chronic juvenile offenders and their families. Motivational interviewing points to the effectiveness of this strategy in lowering criminal inclinations and associated issues Mears et al., (2006).

Conclusion

This study was designed to understand the effectiveness of motivational interviewing intervention and recidivism in lifetime imprisoned inmates, six subjects were carefully chosen on exclusion and inclusion criteria. The period of intervention was constructed on entire eight sessions; the study indicates a significant improvement in recidivism. The current study on motivational interviewing (MI) is effective in reducing criminal tendencies, antisocial personality problems, and recidivistic behaviors. This section is going to highlight the combination of previous literature and current study findings. There was a statistically significant difference between the pre and post-results of the intervention group. Results also indicated that therapy had a great impact on lowering the effect on recidivism.

Ethical Considerations

It is of utmost importance that the researcher ensures no psychological or emotional harm shall be faced by the participant. There are certain issues of immense importance such as rights, dignity, safety, well-being, distress, well-being, anxiety, exploitation, misrepresentation, and or identifications of the contributors of the study regarding the publication of shown research that shall be kept confidential and intact free of personal biases.

Implications: The study suggests that Motivational Interviewing is a promising technique for reducing recidivism among lifetime imprisoned inmates. Therefore, it has important implications for promoting the use of this technique in prison rehabilitation programs. It highlights the need for effective prison rehabilitation programs that can address the underlying causes of criminal behavior and help reduce the risk of recidivism. The study helps alleviate the problem of overcrowding in prisons and reduce the burden on the criminal justice system. Recidivism is associated with high costs to the criminal justice system, victims, and society at large. Therefore, cost saving improves public safety, and reduces the impact of crime on society.

Limitations: The study might have a limited sample size, which did not provide adequate statistical power to detect significant differences between the intervention groups. The study might rely on self-reported measures subject to bias and not accurately reflect the true extent of recidivism. The research can only be related to the prison population and cannot be used in other groups or settings. The study may not have had a long follow-up period to determine the long-term effects of follow-up interviews.

Suggestions: The study was conducted in eight sessions, which may not be sufficient to meet the needs of prisoners in prison. Therefore, it is recommended that additional courses and interventions be added to provide prisoners with more opportunities to learn and apply MI techniques. Although the results of the study were positive, it was conducted in a small sample of only six prisoners. Therefore, it is recommended that future studies on MI and recidivism include larger samples to strengthen the findings. Since the study found that MI is effective in reducing recidivism, it is recommended that prison staff be trained in MI techniques. This would allow them to use the same system in many locations and reduce the chances of many prisoners reoffending. It is recommended that prisoners treated for MI be followed up after discharge to determine if the treatment has had a long-term effect on recidivism. This could be accomplished through a screening process conducted by the prison or other institution.

References

1. Aamer, A., Ayub, K., & Khan, R. (2023). Legal Framework on Compensation for Wrongful Conviction in Pakistan: A Comparative Analysis with Washington and England Laws. *Journal of Social Sciences Review*, 3(2), 903-910. <https://doi.org/10.54183/jssr.v3i2.311>
2. Albarbari, H. S., Al-Awami, H. M., Bazroon, A. A., Aldibil, H. H., Alkhalifah, S. M., & Menezes, R. G. (2021). Criminal behavior and mental illness in the Arab World. *Journal of Forensic Sciences*, 66(6), 2092-2103. <https://doi.org/10.1111/1556-4029.14882>
3. Ali, S. I., Khan, A., Fatima, H., & Hussain, S. A. (2017). A call to reinstate Pakistan's death penalty moratorium. *The Lancet*, 390(10113), 2623. [https://doi.org/10.1016/s0140-6736\(17\)33110-0](https://doi.org/10.1016/s0140-6736(17)33110-0)
4. Annemarieke, Blanckstein., Rachel, E., A., van, der, Rijken., Hester, V, Eeren., Aurelie, M., C., Lange., Ron, H., J., Scholte., Ron, H., J., Scholte., Xavier, Moonen., Katrien, De, Vuyst., Jo, Leunissen., Robert, Didden. (2019). Evaluating the effects of multisystemic therapy for adolescents with intellectual disabilities and antisocial or delinquent behaviour and their parents. *Journal of Applied Research in Intellectual Disabilities*, doi: 10.1111/JAR.12551
5. Ansah, E. W., Addae, J., Hagan, J. E., & Baidoo, M. A. (2023). Assessing stress levels, predictors and management strategies of inmates at Ankaful prison complex in the central region, Ghana. *Behavioral Sciences*, 13(3), 201. <https://doi.org/10.3390/bs13030201>
6. Ashli, J., Sheidow., Michael, R., McCart., Maryann, Davis. (2016). Multisystemic Therapy for Emerging Adults With Serious Mental Illness and Justice Involvement. *Cognitive and Behavioral Practice*, doi: 10.1016/J.CBPRA.2015.09.003
7. Austin, K. (2011). The spirit of change: Adapting motivational interviewing for offenders. *PsycEXTRA Dataset*. <https://doi.org/10.1037/e556502013-015>
8. Auty, K. M., Cope, A., & Liebling, A. (2017). Psychoeducational programs for reducing prison violence: A systematic review. *Aggression and Violent Behavior*, 33, 126-143. <https://doi.org/10.1016/j.avb.2017.01.018>

9. Baglivio, M. T., Wolff, K. T., Piquero, A. R., & Epps, N. (2015). The relationship between adverse childhood experiences (ACE) and juvenile offending trajectories in a juvenile offender sample. *Journal of Criminal Justice*, 43(3), 229-241. <https://doi.org/10.1016/j.jcrimjus.2015.04.012>
10. Baranyi, G., Scholl, C., Fazel, S., Patel, V., Priebe, S., & Mundt, A. P. (2019). Severe mental illness and substance use disorders in prisoners in low-income and middle-income countries: A systematic review and meta-analysis of prevalence studies. *The Lancet Global Health*, 7(4), e461-e471. [https://doi.org/10.1016/s2214-109x\(18\)30539-4](https://doi.org/10.1016/s2214-109x(18)30539-4)
11. Beaudry, G., Yu, R., Perry, A. E., & Fazel, S. (2021). Effectiveness of psychological interventions in prison to reduce recidivism: A systematic review and meta-analysis of randomized controlled trials. *The Lancet Psychiatry*, 8(9), 759-773. [https://doi.org/10.1016/s2215-0366\(21\)00170-x](https://doi.org/10.1016/s2215-0366(21)00170-x)
12. Belet, B., D'Hondt, F., Horn, M., Amad, A., Carton, F., Thomas, P., Vaiva, G., & Fovet, T. (2020). Trouble de stress post-traumatique en milieu pénitentiaire. *L'Encéphale*, 46(6), 493-499. <https://doi.org/10.1016/j.encep.2020.04.017>
13. Bennett, G. (1992). Miller, W. R. and Rollnick, S. (1991) motivational interviewing: Preparing people to change addictive behavior. New York: Guilford press, 1991. Pp. xvii + 348. £24.95 hardback, £11.50 paper. ISBN 0-89862-566-1. *Journal of Community & Applied Social Psychology*, 2(4), 299-300. <https://doi.org/10.1002/casp.2450020410>
14. Berger, E., & Scheidegger, K. S. (2022). Sentence length and recidivism. *Federal Sentencing Reporter*, 35(1), 59-72. <https://doi.org/10.1525/fsr.2022.35.1.59>
15. Browne, C. C., Korobanova, D., Chemjong, P., Harris, A. W., Glozier, N., Basson, J., Spencer, S., & Dean, K. (2022). Continuity of mental health care during the transition from prison to the community following brief periods of imprisonment. *Frontiers in Psychiatry*, 13. <https://doi.org/10.3389/fpsyt.2022.934837>
16. Burke, B. L., Arkowitz, H., & Menchola, M. (2003). The efficacy of motivational interviewing: A meta-analysis of controlled clinical trials. *Journal of Consulting and Clinical Psychology*, 71(5), 843-861. <https://doi.org/10.1037/0022-006x.71.5.843>
17. Burke, B. L., Arkowitz, H., & Menchola, M. (2003). The efficacy of motivational interviewing: A meta-analysis of controlled clinical trials. *Journal of Consulting and Clinical Psychology*, 71(5), 843-861. <https://doi.org/10.1037/0022-006x.71.5.843>
18. Carpio Domínguez, J. L., Vargas Orozco, C. M., Villarreal Sotelo, K., & Montoya Coello, M. G. (2020). An approach to the context of mental illness in the penitentiary system of the state of Tamaulipas, Mexico. *International Journal of Social Sciences*, IX(2). <https://doi.org/10.20472/ss2020.9.2.003>
19. Charles, M., Borduin, C., Cynthia, E., Brown, M., Kaitlin, M., Sheerin. (2018). Multisystemic Therapy for Serious Juvenile Offenders: From Development to Dissemination. doi: 10.1007/978-3-030-01030-0_13
20. Conclusions: Some principles of public health and health in prisons. (2012). *Health and Health Promotion in Prisons*, 127-128. <https://doi.org/10.4324/9780203083239-14>
21. Dastagir Ghulam, S. L. (2023). The role of prosecution in improving justice delivery: A case study of Pakistan's criminal justice system. *Pakistan Journal of International Affairs*, 6(2). <https://doi.org/10.52337/pjia.v6i2.806>
22. David, P., Forman, T., Theresa, B., Moyers. (2019). With the odds of a single session, motivational interviewing is a good bet. *Psychotherapy*, doi: 10.1037/PST0000199
23. Dewa, L. H., Kyle, S. D., Hassan, L., Shaw, J., & Senior, J. (2015). Prevalence, associated factors and management of insomnia in prison populations: An integrative review. *Sleep Medicine Reviews*, 24, 13-27. <https://doi.org/10.1016/j.smr.2014.12.002>

24. DFTB, T. (2021). Motivational interviewing: Facilitating behavior change. Don't Forget The Bubbles. <https://doi.org/10.31440/dftb.46685>
25. Dix, H. (2016). Motivational interviewing and social work education: The power of relationship based practice. *The Journal of Practice Teaching and Learning*, 14(1), 59-72. <https://doi.org/10.1921/jpts.v14i1.884>
26. Douglas, L., Polcin., Madhabika, B., Nayak., Rachael, Korcha., Sheila, Pugh., Jane, Witbrodt., Michelle, Salinardi., Gantt, P., Galloway., Emily, Nelson. (2019). Heavy Drinking among Women Receiving Intensive Motivational Interviewing: 6-Month Outcomes. *Journal of Psychoactive Drugs*, doi: 10.1080/02791072.2019.1634302
27. Drakeford, L. (2018). Mental health and the role of religious context among inmates in state and federal prisons: Results from a multilevel analysis. *Society and Mental Health*, 9(1), 51-73. <https://doi.org/10.1177/2156869318763248>
28. Eirik, Abildsnes., Nina, Elin, Andresen., Solveig, Storbækken., Gro, Beate, Samdal., Thomas, Mildestvedt., Eivind, Meland. (2021). How is motivational interviewing (un)related to self-determination theory: An empirical study from different healthcare settings. *Scandinavian Journal of Psychology*, doi: 10.1111/SJOP.12757
29. Engdaw, G. T., Masresha, A. G., & Tesfaye, A. H. (2023). Self-reported personal hygiene practice and associated factors among prison inmates in Gondar city, northwest Ethiopia: An institution-based cross-sectional study. *The American Journal of Tropical Medicine and Hygiene*. <https://doi.org/10.4269/ajtmh.23-0001>
30. Gendreau, P., & Goggin, C. (2019). Solitary confinement and punishment. *The Wiley International Handbook of Correctional Psychology*, 131-143. <https://doi.org/10.1002/9781119139980.ch8>
31. González, R. A., Vélez-Pastrana, M. C., Ruiz Varcárcel, J. J., Levin, F. R., & Albizu-García, C. E. (2012). Childhood ADHD symptoms are associated with lifetime and current illicit substance-use disorders and in-site health risk behaviors in a representative sample of Latino prison inmates. *Journal of Attention Disorders*, 19(4), 301-312. <https://doi.org/10.1177/1087054712461690>
32. Gottfried, E. D., & Christopher, S. C. (2017). Mental disorders among criminal offenders. *Journal of Correctional Health Care*, 23(3), 336-346. <https://doi.org/10.1177/1078345817716180>
33. Hall, K., Gibbie, T., & Lubman, D. I. (2012). Motivational interviewing techniques: Facilitating Behaviour change in the general practice setting. *Australian Family Physician*, 41(9), 660-667 <https://search.informit.org/doi/10.3316/informit.737035419857450>
34. Handayani, F., Monepa, J. M., Liwang, M. N., & Petodo, M. S. (2022). Counseling on dementia, stress, and stress regulation among male prison inmates in palu's city. *E-Amal: Jurnal Pengabdian Kepada Masyarakat*, 2(1), 745-750. <https://doi.org/10.47492/eamal.v2i1.1208>
35. Handayani, F., Monepa, J. M., Liwang, M. N., & Petodo, M. S. (2022). Counseling on dementia, stress, and stress regulation among male prison inmates in palu's city. *E-Amal: Jurnal Pengabdian Kepada Masyarakat*, 2(1), 745-750. <https://doi.org/10.47492/eamal.v2i1.1208>
36. Hatton, D. C., Kleffel, D., & Fisher, A. A. (2006). Prisoners' perspectives of health problems and healthcare in a US women's jail. *Women & Health*, 44(1), 119-136. https://doi.org/10.1300/j013v44n01_07
37. Hebert, A. R. (2020). Correctional Officers' Mental Health Literacy and Attitudes Toward Offenders with Mental Illness. Louisiana State University and Agricultural & Mechanical College 10.31390/gradschool_dissertations.5170.

38. Hebert, A. (n.d.). Correctional officers' mental health literacy and attitudes toward offenders with mental illness. https://doi.org/10.31390/gradschool_dissertations.5170
39. Henggeler, S. W., Melton, G. B., Brondino, M. J., Scherer, D. G., & Hanley, J. H. (1997). Multisystemic therapy with violent and chronic juvenile offenders and their families: The role of treatment fidelity in successful dissemination. *Journal of Consulting and Clinical Psychology*, 65(5), 821-833. <https://doi.org/10.1037/0022-006x.65.5.821>
40. Hettema, J., Steele, J., & Miller, W. R. (2005). Motivational interviewing. *Annual Review of Clinical Psychology*, 1(1), 91-111. <https://doi.org/10.1146/annurev.clinpsy.1.102803.143833>
41. Huang, G., Zhang, Y., Momartin, S., Huang, X., & Zhao, L. (2008). Child sexual abuse, coping strategies and lifetime posttraumatic stress disorder among female inmates. *International Journal of Prisoner Health*, 4(1), 54-63. <https://doi.org/10.1080/17449200701875840>
42. Jeremy Travis. But they all come back: Facing the challenges of prisoner reentry. Washington DC: The urban institute press; 2005: ISBN 0-87766-750-0. (2006). *Journal of Urban Health*, 83(3), 370-371. <https://doi.org/10.1007/s11524-006-9046-5>
43. Johnson, N. S. (2017). Secondary Traumatic Stress, Compassion Fatigue, and Burnout: How Working In Correctional Settings Affects Mental Health Providers [Doctoral dissertation, Antioch University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=antioch1477328356041575
44. Kokab Jabeen. (2022). Plight of female prisoners in Pakistan. *Pakistan Postgraduate Medical Journal*, 33(03), 48-49. <https://doi.org/10.51642/ppmj.v33i03.511>
45. Leonard, N. R., Jha, A. P., Casarjian, B., Goolsarran, M., Garcia, C., Cleland, C. M., Gwadz, M. V., & Massey, Z. (2013). Mindfulness training improves attentional task performance in incarcerated youth: A group randomized controlled intervention trial. *Frontiers in Psychology*, 4. <https://doi.org/10.3389/fpsyg.2013.00792>
46. Liebling, A. (2019). Dirk van Zyl Smit and Catherine Appleton, life imprisonment: A global human rights analysis, Cambridge, MA: Harvard University press, 2019, xvi + 447 pp, HB £36.95. *The Modern Law Review*, 83(1), 241-245. <https://doi.org/10.1111/1468-2230.12481>
47. Loeffler, C. E., & Nagin, D. S. (2022). The impact of incarceration on recidivism. *Annual Review of Criminology*, 5(1), 133-152. <https://doi.org/10.1146/annurev-criminol-030920-112506>
48. Lowenstein, A. (1984). Coping with stress: The case of prisoner's wives. *Journal of Marriage and the Family*, 46(3), 699. <https://doi.org/10.2307/352611>
49. LOZA, W., DHALIWAL, G., KRONER, D. G., & LOZA-FANOUS, A. (2000). Reliability, construct, and concurrent Validities of the self-appraisal questionnaire. *Criminal Justice and Behavior*, 27(3), 356-374. <https://doi.org/10.1177/0093854800027003005>
50. Lundahl, B., Moleni, T., Burke, B. L., Butters, R., Tollefson, D., Butler, C., & Rollnick, S. (2013). Motivational interviewing in medical care settings: A systematic review and meta-analysis of randomized controlled trials. *Patient Education and Counseling*, 93(2), 157-168. <https://doi.org/10.1016/j.pec.2013.07.012>
51. Lutz, A., Slagter, H. A., Rawlings, N. B., Francis, A. D., Greischar, L. L., & Davidson, R. J. (2009). Mental training enhances attentional stability: Neural and behavioral evidence. *The Journal of Neuroscience*, 29(42), 13418-13427. <https://doi.org/10.1523/jneurosci.1614-09.2009>

52. Madson, M. B., Lane, C., & Noble, J. J. (2012). Delivering quality motivational interviewing training: A survey of MI trainers. *Motivational Interviewing: Training, Research, Implementation, Practice*, 1(1), 16-24. <https://doi.org/10.5195/mitrip.2012.8>
53. Manuel, Vega., Mitchell, Silverman. (1988). Stress and the Elderly Convict. *International Journal of Offender Therapy and Comparative Criminology*, doi: 10.1177/0306624X8803200208
54. Mary Kariuki; Teresa Njonge., P. N. (2021). Influence of physiological stress coping strategies on the psychological well-being of life-sentenced inmates in maximum-security prisons in Kenya. *Editon Consortium Journal of Psychology, Guidance, and Counseling*, 3(1). <https://doi.org/10.51317/ecjpgc.v3i1.283>
55. Maschi, T., Viola, D., Morgen, K., & Koskinen, L. (2015). Trauma, stress, grief, loss, and separation among older adults in prison: The protective role of coping resources on physical and mental well-being. *Journal of Crime and Justice*, 38(1), 113-136. <https://doi.org/10.1080/0735648x.2013.808853>
56. McCallie, M. S., Blum, C. M., & Hood, C. J. (2006). Progressive muscle relaxation. *Journal of Human Behavior in the Social Environment*, 13(3), 51-66. https://doi.org/10.1300/j137v13n03_04
57. Mears, D. P., Roman, C. G., Wolff, A., & Buck, J. (2006). Faith-based efforts to improve prisoner reentry: Assessing the logic and evidence. *Journal of Criminal Justice*, 34(4), 351-367. <https://doi.org/10.1016/j.jcrimjus.2006.05.002>
58. Meek, R., Gallant, D., & Sherry, E. (2015). Sport in prison: Exploring the role of physical activity in correctional settings. *Sport Management Review*, 18(1), 152-153. <https://doi.org/10.1016/j.smr.2014.05.005>
59. Miller, W. R., & Mount, K. A. (2001). A small study of training in motivational interviewing: Does one workshop change clinician and client behavior? *Behavioural and Cognitive Psychotherapy*, 29(4), 457-471. <https://doi.org/10.1017/s1352465801004064>
60. Miller, W. R., & Moyers, T. B. (2006). Eight stages in learning motivational interviewing. *Journal of Teaching in the Addictions*, 5(1), 3-17. https://doi.org/10.1300/j188v05n01_02
61. Omoigberai Bashiru, B. (2017). Oral health knowledge and attitude as determinants of oral health behavior in a sample of old people in Port Harcourt, Rivers State, Nigeria. *European Journal of Preventive Medicine*, 5(4), 45. <https://doi.org/10.11648/j.ejpm.20170504.12>
62. Patricia, Davern, Soderlund. (2018). Effectiveness of motivational interviewing for improving physical activity self-management for adults with type 2 diabetes: A review:. *Chronic Illness*, doi: 10.1177/1742395317699449
63. Pulford, A., Aspinall, E., Hardie, S., Murphy, L., McDevitt, R., & Watts, M. (2011). Prisoners' self-reported health and attitudes to health promotion initiatives in a Scottish prison. *Health Education Journal*, 72(1), 5-12. <https://doi.org/10.1177/0017896911425536>
64. Pulford, A., Aspinall, E., Hardie, S., Murphy, L., McDevitt, R., & Watts, M. (2013). Prisoners' self-reported health and attitudes to health promotion initiatives in a Scottish prison. *Health Education Journal*, 72(1), 5-12. <https://doi.org/10.1177/0017896911425536>
65. Pulford, A., Aspinall, E., Hardie, S., Murphy, L., McDevitt, R., & Watts, M. (2013). Prisoners' self-reported health and attitudes to health promotion initiatives in a Scottish prison. *Health Education Journal*, 72(1), 5-12. <https://doi.org/10.1177/0017896911425536>
66. Robert, K., Guthrie. (1998). The Prevalence of Posttraumatic Stress Disorder among Federal Prison Inmates. doi: 10.33915/ETD.3951
67. Roehrkaase, A. F., & Wildeman, C. (2022). Lifetime risk of imprisonment in the United States remains high and starkly unequal. *Science Advances*, 8(48). <https://doi.org/10.1126/sciadv.abo3395>

68. Roehrkasse, A. F., & Wildeman, C. (2022). Lifetime risk of imprisonment in the United States remains high and starkly unequal. *Science Advances*, 8(48). <https://doi.org/10.1126/sciadv.abo3395>
69. Rollnick, S., & Miller, W. R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychotherapy*, 23(4), 325-334. <https://doi.org/10.1017/s135246580001643x>
70. Rollnick, S., Butler, C. C., Kinnersley, P., Gregory, J., & Mash, B. (2010). Motivational interviewing. *BMJ*, 340(apr27 2), c1900-c1900. <https://doi.org/10.1136/bmj.c1900>
71. Rollnick, S., Miller, W. R., Butler, C. C., & Aloia, M. S. (2008). Motivational interviewing in health care: Helping patients change behavior. *COPD: Journal of Chronic Obstructive Pulmonary Disease*, 5(3), 203-203. <https://doi.org/10.1080/15412550802093108>
72. Ruedy, N. E., & Schweitzer, M. E. (2010). In the moment: The effect of mindfulness on ethical decision making. *Journal of Business Ethics*, 95(S1), 73-87. <https://doi.org/10.1007/s10551-011-0796-y>
73. Shah, A. H., Wyne, A. H., Asiri, F. Y., Gulzar, S., Sheehan, S. A., Alghmlas, A. S., Alomari, O., & Aljameel, A. H. (2020). Effectiveness of preventive oral health measures among special care school children (boys) in al-kharj, Saudi Arabia. *JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH*. <https://doi.org/10.7860/jcdr/2020/45329.13945>
74. Shaheen, T., & Khadam, N. (2022). Life imprisonment: Life or 25 years, a law that requires interpretation, in Pakistan. *Cogent Arts & Humanities*, 9(1). <https://doi.org/10.1080/23311983.2022.2089491>
75. Siti, Balqis, Mohd, Azam., Siti, Hajar, Abu, Bakar., Jal, Zabdi, Mohd, Yusoff., Siti, Hajar, Abdul, Rauf. (2021). A case study on academic and vocational training for child offenders undergoing a multisystemic therapy-based rehabilitation order in Malaysia. *Children and Youth Services Review*, doi: 10.1016/J.CHILDYOUTH.2020.105911
76. Steindl, S. R., Kirby, J. N., & Tellegan, C. (2018). Motivational interviewing in compassion-based interventions: Theory and practical applications. *Clinical Psychologist*, 22(3), 265-279. <https://doi.org/10.1111/cp.12146>
77. Stewart, A. C., Cossar, R., Lee Wilkinson, A., Scott, N., Dietze, P., Quinn, B., Kinner, S. A., Aitken, C., Walker, S., Curtis, M., Butler, T., Ogloff, J. R., & Stoové, M. (2021). Psychiatric well-being among men leaving prison reporting a history of injecting drug use: A longitudinal analysis. *Australian & New Zealand Journal of Psychiatry*, 56(8), 1034-1043. <https://doi.org/10.1177/00048674211048143>
78. Suter, J. M., Byrne, M. K., Byrne, S., Howells, K., & Day, A. (2002). Anger in prisoners: Women are different from men. *Personality and Individual Differences*, 32(6), 1087-1100. [https://doi.org/10.1016/s0191-8869\(01\)00105-2](https://doi.org/10.1016/s0191-8869(01)00105-2)
79. Vipond, R. (2023). Theorising punishment and the pains of imprisonment. *A Guide to Prisons and Penal Policy*, 75-94. <https://doi.org/10.51952/9781447365440.ch006>
80. Walker, C., Thomas, J., & Allen, T. S. (2003). Treating impulsivity, irritability, and aggression of antisocial personality disorder with Quetiapine. *International Journal of Offender Therapy and Comparative Criminology*, 47(5), 556-567. <https://doi.org/10.1177/0306624x03253027>
81. Walker, H., Connaughton, J., Wilson, I., & Martin, C. (2012). Improving outcomes for psychoses through the use of psycho-education; preliminary findings. *Journal of Psychiatric and Mental Health Nursing*, 19(10), 881-890. <https://doi.org/10.1111/j.1365-2850.2012.01873.x>
82. Wallace, D., & Wang, X. (2020). Does in-prison physical and mental health impact recidivism? *SSM - Population Health*, 11, 100569. <https://doi.org/10.1016/j.ssmph.2020.100569>

83. Ward, T., & Birgden, A. (2007). Human rights and correctional clinical practice. Aggression and Violent Behavior, 12(6), 628-643. <https://doi.org/10.1016/j.avb.2007.05.001>
84. Westra, H. A., & Aviram, A. (2013). Core skills in motivational interviewing. Psychotherapy, 50(3), 273-278. <https://doi.org/10.1037/a0032409>
85. Woolson, R. F. (2008). Wilcoxon signed-rank test. Wiley Encyclopedia of Clinical Trials, 1-3. <https://doi.org/10.1002/9780471462422.eoct979>
86. Zamble, E. (1992). Behavior and adaptation in long-term prison inmates. Criminal Justice and Behavior, 19(4), 409-425. <https://doi.org/10.1177/0093854892019004005>