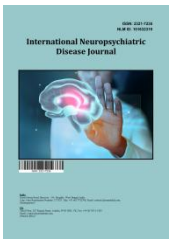

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Mental and Physical Well Being in Prisoners

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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Review Article

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ABSTRACT

Global health attention is necessary to improve the prison population mental and physical health because limited public health ramifications and inmates' psychological effects impose many strains on community preventive measures and prison rehabilitation. Though some prisoners are younger than the general population, the jail population often has the worse health. Many have considerable mental and physical health needs as a result of social and economic poverty. Since many prisoners have histories of tobacco use and alcohol or drugs, many of these risk patterns result in addictions that are tied to unhealthy lifestyles. Prior contact with mental health, substance use or medical services typically was very limited or absent due to lack of access to treatment, diminished resources, barriers for the uninsured and underserved, financial stability to afford care, stigma, or reluctance to focus on self-care. There are certain mental health disorders and infectious diseases that are prevalent in prisoners and should be addressed. Many prisoners have serious, debilitating mental and physical conditions that go untreated or undiagnosed while they are incarcerated. Prior to being incarcerated, If crime and incarceration are to be decreased and rehabilitative efforts are increased to deter re-incarceration, preventive measures are necessary that include community mental and medical services accessibility and affordability while availability of such services are provided in prison and coordination of care of evidence-based therapy and infection-control

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strategies are highly recommended before the inmate returns to the community. This review covers most common mental and physical health issues and their management for inmates because few research has explored how having a mental health disorder compound with a physical ailment affects an inmate's behavior while advocating for human rights-informed strategies for the treatment of people in the criminal justice system.

Keywords: Criminal justice system; community re-entry; rehabilitation; human rights; mental illness; physical health.

1. INTRODUCTION

A increasing body of literature outlines the negative effects of incarceration on mental health in response to rising (but recently stable) incarceration rates [1,2]. The study of the connection between incarceration and mental health is motivated by theories that outline the detrimental effects of stress on one's health as well as the idea that being imprisoned is a stressful, isolating, and stigmatizing life event [3-6]. Early scholars described how the confinement and regimentation of incarceration lead to offenders having greater rates of mental health illnesses than they could have had if they had remained in the community, highlighting the psychological costs of incarceration [3,7-9]. More recent research on the psychological costs of incarceration considers whether these effects extend outside the walls of the jail or prison, building on these insights and other research suggesting that incarceration is negatively associated with people's finances [10], family ties [11], and physical health [12]. According to studies, those with a history of incarceration are substantially more likely to have serious depression, life dissatisfaction, and mood disorders such dysthymia than people without a history of incarceration [13-16]. The effects of incarceration on mental health are both immediate for individuals who are incarcerated today and long-lasting for those who have been detained in the past [17]. Therefore, global strategies are necessary to increase access to and availability of mental and physical health care while reducing psychological adverse effects and costs associated with incarceration.

The deinstitutionalization of mental health facilities across the United States of America (U.S.A) and other countries over the past fifty years has resulted in an increase in the number of people with mental illnesses incarcerated in prisons, with research indicating that there are ten times as many people with mental illnesses in prison or jail as there are in mental health hospitals. In addition to this considerable increase in mental illnesses among those who are incarcerated, co-occurring disorder rates are startling [18-21]. According to research in the field of corrections, inmates with co-occurring illnesses are more prone to engage in misconduct and violence as well as be the targets of such aggressiveness [22-28]. When a person has both a mental health disorder and a substance use disorder, researchers often refer to that person as having a co-occurring disorder. Despite the fact that those in jail have worse physical health than those who are not institutionalized, no research has looked at how having a mental disorder along with a physical ailment affects prison behavior [28-30].

Prison inmates tend to have astonishingly bad health profiles [31], including higher than average rates of mental illness [32], drug abuse [33], both communicable [34] and no communicable diseases [35], and intellectual handicap [35-37]. Co-occurring health issues are frequently accompanied by ingrained socioeconomic deprivation and frequently interact asyndetically. People who frequently experience significant barriers to getting health care in the community can typically find low threshold access to health services while incarcerated. However, the majority of those who are imprisoned stay there for only a brief period before being released back into society, making prisoner health a matter of public health. The amount of people who pass through jails each year around the world makes it crucial for global health to improve this population's health [38-40].

2. MEDICAL ISSUES IN INMATE PRISONERS

Correctional facilities frequently lack the necessary resources to care for the medically underserved, and inmates have disease rates that are much greater than those of the general community. This population typically has higher rates of infectious disease, psychological issues, and drug use and addiction. Environmental

elements like violence or crowding may also have a negative impact on a person's health. Inmates and former inmates are more likely to assess their general health poorly, have several chronic medical conditions, and have limited access to medical care. Over 50% of the 1200 prisoners in the Massachusetts prison system who participated in a study about their health indicated that it was good, fair, or bad [41]. Compared to the general population, inmates are more likely to report having chronic medical conditions such arthritis, asthma, hypertension, cervical cancer and hepatitis [42]. It is prohibited to deny inmate's access to medical care while they are incarcerated since doing so constitutes "cruel and unusual punishment," according to the 1976 Texas ruling in the Estelle v. Gamble case. However, before and after being released from prison, inmates are less likely to have access to the right medical treatment. Acute care use prior to arrest was recorded by 52% of older prisoners, and emergency department use after release was anticipated by 47% of them [43]. Those having a primary care physician used the emergency room less frequently than those who were no longer homeless. Inmates who had just been released from prison were more likely to go to the emergency room for mental health issues than the general population. Substance use disorders and illnesses require ambulatory care [44-47] that further complicates treatment when accessible care is unavailable, inaccessible, or inadequate within the prison or community, or refused by the individual.

2.1 Infectious Diseases

Compared to the community, jail populations have higher rates of infectious illness. People who are in correctional facilities are around three times more likely to have HIV or AIDS compared to the general population, and they are also more likely to have hepatitis C and TB. However, many prisoners may not always have access to HIV testing and evidence-based therapy. Along with chlamydia, gonorrhoea, and syphilis, rates of other STIs including chlamydia are also higher among the prison population. STI rates are higher for women than for men in prisons. Additionally, those who are imprisoned or housed in detention facilities might not get the required immunizations, which could cause an outbreak of contagious illnesses like the flu and COVID-19 [48]. The data on infectious diseasesfrom studies are delineated in Fig. 1.

2.2 Mental Health

The Diagnostic and Statistical Manual (DSM)-V criteria for alcohol or other substance dependency or misuse are thought to be met by more than 65% of those who are jailed. Unfortunately, only 11% of those who are incarcerated obtain substance use treatment for their drug use issue. For this reason, people with chronic addictions are more likely to experience withdrawal symptoms while in detention and then overdose when they are released back into society [51,52].

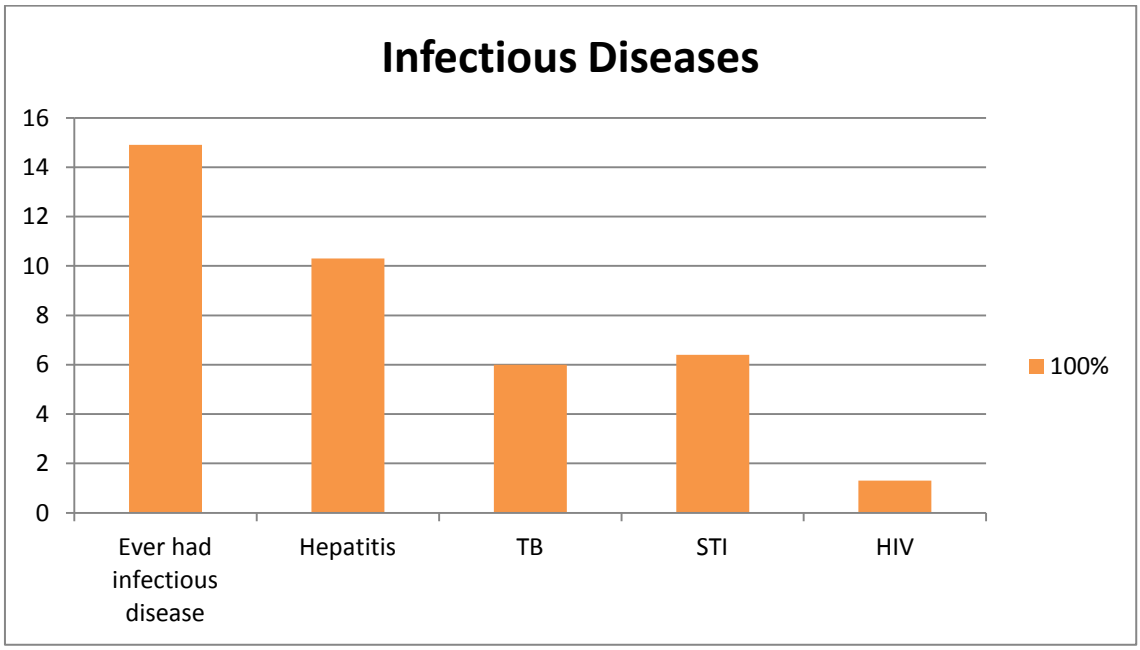

Fig. 1. Infectious diseases [49,50]

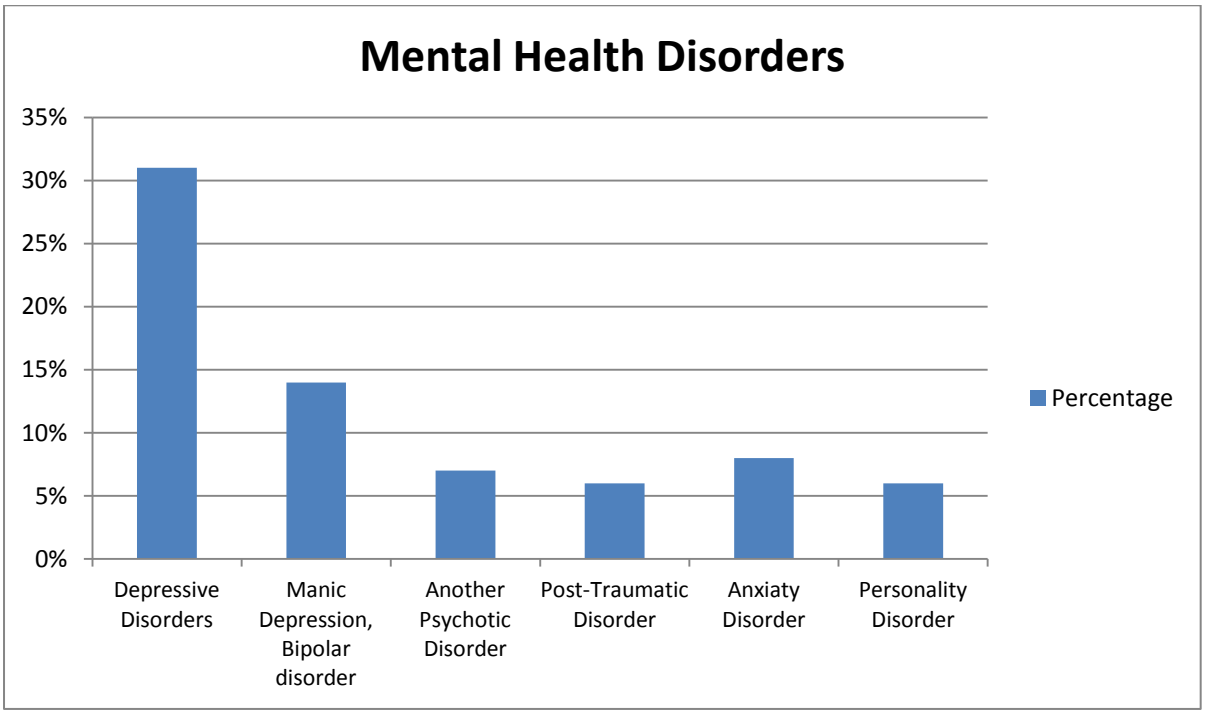

Fig. 2. Mental disorders among prisoners [50]

The number of drug overdose deaths in the United States has climbed 137% since 2000, with an increase of 200% involving opioids [52]. Opioids, particularly heroin and prescription painkillers, are to blame for the majority of drug overdoses in the United States. Although these deaths were primarily linked to prescription opioids, starting in 2016, illegal opioids (such as heroin and fentanyl) took over as the primary cause of overdose deaths. The number of people incarcerated with opioid use disorders may rise along with the use of illicit drugs. Treatment for substance use disorders that is supported by evidence enhances health outcomes and slows the spread of infectious illnesses. Additionally, it has been demonstrated that treating inmates' substance use issues lowers mortality and recidivism.

2.3 Violence and Suicides

Corrections officers, inmates, and staff members at facilities for correctional administration frequently sustain intentional and unintentional injuries. In one survey, almost 32% [53] of inmates at state prisons said they had been hurt since being admitted. From 2000 to 2014, suicide accounted for approximately one-third of all deaths in local jails, making it the most common cause of death there [53].

2.4 Reproductive Health Issues

The majority of jailed women in 2017 were under the age of 40s, making up 17% of adults in jails and 7% of adults in prisons [54], showing a group with particular needs for reproductive health care. Women of color are overrepresented in the jail population within this group. Between 6 and 10% of women who are detained are expecting at any given time. According to one research, 43% of pregnant women entering Rhode Island's prison had given birth within a year of being released from a previous jail sentence. Of these women, 14% of those women had given birth within 90 days of a previous discharge [55].

Another study indicated that in 2004, 4% of women were pregnant when they were first imprisoned, but only slightly more than half received prenatal care. The quantity of jail prenatal care seems to be favorably correlated with infant birth weight among pregnant women who enter prison in the first trimester and give birth at term. When caring for pregnant women, the majority of state prison healthcare providers, however, do not follow established guidelines and best practices [56].

Despite the existence of healthcare standards from the National Commission for Correctional Health Care, which include nondirective options

counseling including abortion, adoptive services, or continuing the pregnancy, incarcerated women and other detained individuals are at higher risk of reproductive injustice and have inconsistent access to comprehensive reproductive health care. Data on abortions, stillbirths, miscarriages, ectopic pregnancies, and neonatal and pregnancy-related deaths are not routinely or consistently gathered in prisons, despite studies studying reproductive health outcomes in small cohorts of inmates [14,57-59].

3. PARENTAL INCARCERTATION AND CHILDREN'S HEALTH AND WELL-BEING

The research on the link between parental incarceration and children's health and wellbeing was examined by Wildeman et al. [60] Only higher-quality research was included in the review to enable assessment of causal effects. They discovered data demonstrating a link between parental incarceration and poor physical health outcomes (pregnancy, self-reported health, obesity, and mortality), poor mental health, behavioral issues, school disengagement and out-of-home care, risky behavior, and contact with the criminal justice system. The authors also noted a few significant modifiers of this link, such as domestic violence, a conviction for a violent crime, and a parent's likelihood to go to jail. They postulated that these features could be indicators of domestic violence or abuse, and that locking up a parent who exhibits these traits could negatively impose on the health and wellbeing of their children. Further research on the effects of maternal incarceration is urgently needed since the study discovered that the evidence supporting a unfavorable link between maternal incarceration and child outcomes is conflicting. Regardless of the causes and discussions surrounding the relationship to health disparities in children, mass incarceration seems to be a significant factor, at least in the United States [61-63].

4. EVIDENCE-BASED THERAPY USAGE WITH PRISONERS

Research has revealed that the demographic, health, and criminal features of female prisoners differ from those of male s in the majority of jails around the world. For female prisoners, some trauma-focused therapy is highly recommended and has been implemented. The majority, however, has reported non-significant results are small, which may indicate lack of treatment engagement, insufficient therapeutical understanding, or resistance to change. A trauma-focused Cognitive Behavior Therapy (CBT)strategy called "Seeking Safety" has not been shown to produce better results than standard care (i.e., 180-240 hours of individual and group treatment) [64]. Another RCT contrasting supportive group therapy for trauma affect regulation found no differences in recovery between the groups. Larger trials are required to thoroughly assess the efficacy of trauma-focused therapy notwithstanding the dismal outcome. RCTs for alternative therapies, such as CBT, mindfulness, and Dialectical Behavior Therapy (DBT), among female convicts are lacking [65].

5. INFECTIOUS DISEASES AND MANAGEMENT IN PRISONERS

Blood-borne viruses (BBVs), such as HIV, hepatitis B, and hepatitis C (HCV), are disproportionately common in inmates who often change institutions. One explanation for this is the increased likelihood of risky behaviors for these illnesses among those who are incarcerated, such as drug injection, unprotected intercourse, and improvised tattoos and body piercing. The prevalence of these BBV risk behaviors among convicts internationally was taken into account by Moazen et al. [66]. They discovered a significant frequency of BBV risk behaviors in jail across 53 nations, with estimates showing notable heterogeneity that is only partially accounted for by regional variations. These findings have strong public health ramifications because prisons are crucial locations for diagnosing and treating BBVs as well as for preventing the spread of infection by putting in place evidence-based infection-control strategies.A significant portion of inmates have a history of injecting drugs. Because most prisons lack access to clean injecting equipment, some persons cease injecting while they are in detention, but others continue to do so, often at a lesser frequency, making each session of injection high risk [67,68]. A review of the information available was conducted regarding the effects of prison needle and syringe program (PNSPs) on the health outcomes of program participants [69]. Despite persistent and extensive support for PNSPs , only 5 studies qualified and evaluated the strength of the evidence as weak, even though PNSPs were suggestive of advantages for the prevention of HIV and HCV. Importantly, twhile there is little evidence about staff safety, there have been no known reports of needles being used as a

weapon against staff in prisons that employ a PNSP though it possible. A broader adoption of PSNPs in light of the compelling evidence supporting the advantages of needle and syringe programs in the community [70-72].

A significant chance to detect infectious diseases and begin treatment is possible during incarceration. The ability to accurately identify persons who are infected is necessary to seize this significant public health opportunity [73]. Both testing at prison reception and provider-initiated testing in jail are related with better uptake of testing in their assessment of active case detection for infectious illnesses in prisons [74]. The percentage of inmates who underwent testing varysignificantly between research, and the methodological quality of the majority of studies that were included was judged as being very low [74]. Effective case discovery is essential for enabling treatment scale-up, particularly for the highly effective and well-tolerated direct-acting antiviral therapies for HCV infection. The results of research emphasize the necessity of thorough assessment studies to guide the application of efficient, moral, and economical active case finding techniques in prison settings [75,76]. A complex understanding of the risk factors, treatment hurdles, and structural variables that adversely affect the health of important populations is necessary for effective, suggested preventive.

The epidemiology of infectious illnesses among incarcerated transgender people was explored and revealed that that only few studies had estimates of the prevalence of transgender people in jail, and that the majority of these studies had small samples and frequently relied on self-reported infection, which is known to significantly underestimate infection in prison [77]. A complex understanding of the risk factors, treatment hurdles, and structural variables that adversely affect the health of important populations is necessary for effective, suggested preventive [78]. The prevalence estimates in the studies that were considered were high, but none of them made a comparison between them and their non-transgender counterparts. Those who are sent to prisons who are sex-specific based on birth sex rather than gender identity appear to be at an elevated risk of being violently victimized [77]. There is advocacy for routine collection of data on both assigned sex at birth and gender identity as well as a human rights-informed strategy for the treatment of transgender people in the criminal justice system.

6. MENTAL HEALTH AND MANAGEMENT TO COPE WITH IT

The significance of providing proper assistance and specialized interventions is further emphasized by the fact that mental illness in prisons is one of the most pervasive and difficult current challenges and is intimately linked to high rates of suicide and self-harm in detention. Those with mental health disorders may find the jail atmosphere especially challenging. To ensure that prisons are a place of rehabilitative help, governors and prison wardens are urged to invest in creating an environment that is conducive for mental health. Since prisoners' risk of suicide is likely to rise significantly if they are isolated in cells for extended periods of time with little to occupy their minds, it is argued that all prisoners should spend the working day outside of their cells engaging in healthy, beneficial, and meaningful activities [79]. If prison suicide rates are to decline, institutions must become safer and healthier settings. The World Health Organization (WHO) initially introduced the idea of a health-promoting prison in 1995 [80], and H.M. Inspectorate of Prisons later embraced it as one of their inspection standards. The strategy Health Promoting Prisons: a Shared Approach set out an aspiration of prisons as healthy settings with the potential for health improvement, rehabilitation and reform and enhancing the life chances of all who live and work there, while also acknowledging the unique challenges involved in promoting health within the prison context [81,82].

6.1 Tobacco Usage

Smoking tobacco is a significant contributor to illness and mortality among those who are jailed. In an analysis of studies from 50 different nations,, the prevalence of tobacco use in jail was between 1.04 and 62.6 times greater than in the general population [83]. The study revealed an estimated calculation of 15 million smokers pass through jails worldwide each year based on a conservative estimate of a 2-fold higher prevalence of smoking in prisoners. The estimate, was based on a prediction of global jail throughput, highlighting the significance of precise global prison throughput predictions [39]. The adoption of evidence-based smoking cessation interventions in prison was recommended and, crucially, after release from prison, noting that many prisoners expressed a desire to stop smoking and that prison smoking bans alone have a negligible impact on smoking after release from prison [43,83-85].

6.2 Diverse Health Inequities and Social Exclusion

Prison populations "show considerable indications of health inequities and social exclusion," according to a Department of Health research. The diverse health needs of a population that is vulnerable and socially marginalized must be addressed. Even while it may seem obvious that prisons have the ability to improve the mental health and wellbeing of some of the most disadvantaged members of society, interventions in this area are frequently physical rather than mental, with an emphasis on stopping the spread of disease. Health promotion ideas like empowerment are incompatible with prison cultures, which prioritize deterrence, punishment, and reform. This reflects a reductionist rather than holistic perspective [86-90]. Therefore, a diverse health-promoting prison is more than just a jail with a medical unit; it's a facility where the entire system is designed to improve the physical, mental, and social health and wellbeing of both inmates and staff. It should, to the greatest extent possible, mimic the environment and services of the community while still being a secure location [91,92].

7. CLIMATE EFFECT ON PRISONERS WELL BEING

The social, emotional, organizational, and physical features of a correctional institution as perceived by prisoners and employees are referred to as the prison atmosphere [93]. The following elements make up the prison atmosphere, according to a thorough analysis of the international literature and measuring tools: autonomy, safety and order, meaningful activities, staff-prisoner relationships, communication with the outside world, and facilities. According to earlier studies, a favorable jail environment leads to better conduct, treatment motivation and therapeutic change, and well-being results [39,94-97]. Through a number of processes, the prison environment can impact inmates' wellbeing. First, the parameters within which social life is shaped are provided by the organizational and physical features of the institution. Although incarceration is inevitably accompanied with deprivations, the level to which these deprivations are represented varies across institutions and regimes within institutions. People who spend the majority of their time outside of their cell, are allowed to roam about the jail freely, or are permitted to work outside the prison throughout the day may feel the loss of liberty and autonomy less strongly, for instance [98-102]. Even being able to self-cater and prepare one's own meals in a culinary class might lessen the loss of autonomy, improve well-being, and grant an opportunity to learn a trade that may be useful in the community to secure employment or helpful in sustaining a quality of life while in prison. The availability of facilities for contact with the outside world varies as well. For example, certain nations, like the Netherlands, permit conjugal visits [21] which is impermissible in other countries. Higher security jails typically impose more restrictions and hardships, which is linked to decreased wellbeing. Therefore, according to the deprivation perspective, adjustment is impacted by the challenges faced while incarcerated [103-107].

8. CONCLUSION

Global human rights advocacy is needed to ensure adequate mental and physical health treatment within criminal justice systems as well as pre-discharge community rehabilitative coordination of care when release is permissible. Mandated guidelines are necessary to require evidence-based psychotherapy and infection-control strategies, evaluate the quality and effectiveness of treatment, and validity of extrapolated data to ensure quality assurance and quality improvement. Cost- effective measures must be considered along with the quality of treatment rendered to maximize efficiency of services and ascertain rehabilitative efforts. Though many people suffer from chronic mental illnesses and physical health alignments, some do not receive care while incarcerated and some did not have care prior to being incarcerated which complicates prison rehabilitative strategies and community treatment measures. Criminal justice systems and global public/community health systems must identify effective strategies beneficial for prisoners and society to deter crime, reduce re-incarcerations, and increase access to and availability of mental and physical health quality care while reducing costs associated with imprisonment, rehabilitative treatment, and community re-entry.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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