

## The Comparison Test BCBT an Reduction on SDS and BCS

**Indra Dwi Purnomo <sup>1</sup>**

Faculty of Psychology, Soegijapranata Catholic University, Semarang, Indonesia  
[indradp@unika.ac.id](mailto:indradp@unika.ac.id)

**Rosnah Ismail <sup>2</sup>**

Faculty of Psychology and Social Science, University of Cyber Jaya Malaysia, Selangor, Malaysia  
[rosnah@cyberjaya.edu.my](mailto:rosnah@cyberjaya.edu.my)

**M. Suharsono <sup>3</sup>**

Faculty of Psychology, Soegijapranata Catholic University, Semarang, Indonesia  
[handung@unika.ac.id](mailto:handung@unika.ac.id)

### *Abstract*

*The provision of drug treatment within overcrowded prisons presents significant challenges. This study investigated the effectiveness of Brief Cognitive Behavioral Therapy (BCBT) in reducing methamphetamine dependence severity and craving intensity among incarcerated individuals. A quantitative experimental design compared an intervention group to a control group. Following the screening of 551 prisoners, 170 participants meeting inclusion criteria were randomly assigned to either the BCBT (n=85) or control (n=85) condition. The BCBT group received four individual therapy sessions with two follow-ups over six months. The control group received standard psychoeducational leaflets. The Severity Dependent Scale and a brief craving scale were administered pre- and post-intervention to assess changes in methamphetamine dependence and craving levels. Results indicated a statistically significant decrease in craving within the BCBT group, whereas craving tended to increase in the control group. These findings align with the understanding that recovery is multifaceted, influenced by addiction severity, recovery engagement, and social support, including self-awareness. In conclusion, BCBT demonstrates efficacy in reducing methamphetamine dependence and craving among incarcerated people who use drugs.*

*Keywords: PWUD prisoners, overcrowded, intervention, observation, follow-up*

### INTRODUCTION

World Prison Studies stated that Indonesia is one of the countries in Asia with extremely overcrowded prison conditions, reaching 188% occupancy (Novian et al., 2018). Generally, the number of prisoners exceeds the intended capacity by two to three times, forcing individuals deprived of their liberty to sleep in severely cramped conditions. This situation places prisons in Indonesia in a category of extreme overcrowding, with an occupancy rate exceeding 150% (United Nations Office on Drugs and Crime, 2013). The majority of correctional facilities

across Indonesia are experiencing this issue. These severely overcrowded conditions create significant obstacles to the rehabilitation of prisoners, particularly for People Who Use Drugs (PWUD).

The more overcrowded the prison, the greater negative impact on the PWUD prisoners. The focus of prison officers will be more toward safety than that of the program, including rehabilitation program. Overcrowding is also not conducive to the implementation of prisoner coaching programs to reconstructing their behavior to be more positive. Institute for Criminal Policy Research found before they are released, they can integrate back into social interaction in the community, especially because overcrowding is not accompanied by an increase in adequate facilities and infrastructure (Jacobson et al., 2017).

The Supreme Court's Circular (SEMA-Surat Edaran Mahkamah Agung) and the Attorney General's Circular (SEJA) regarding the placement of narcotics users and addicts in rehabilitation facilities also did not run effectively. From data by the Directorate General of Corrections, in February 2018, the inmates of detention centres and prisons identified as prisoners and prisoners using narcotics exceeded 25,223 people. Of the 33 regional offices of detention centres/penal institutions spread across all provinces in Indonesia, only 5 regional offices in the province did not experience overcrowding. This means that if you use a benchmark for the distribution of any prisons that experience overcrowding and that do not experience overcrowding, then 84.85% of Regional Offices in 28 provinces in Indonesia experience an overcrowding situation, with the highest overcrowding rate, namely, Extreme Overcrowding (>150%), spread over 21 (63.64%) provinces in Indonesia (Winarso et al., 2016).

The Class I prison in Semarang or the Kedung Pane prison, which is mostly inhabited by narcotics convicts, is extremely overcrowded. Considering through the Kedung Pane Lapas Binas Penitentiary data, the number of prisoners of narcotics cases which always increases up to 1320 drug prisoners, even up to overcapacity, which should only be able to accommodate 600 prisoners. Based on the legal facts, there are 1320 drug convicts, consisting of 359 inmates under article 112, 33 prisoners in article 127, and the remaining 92 under article 114 is a drug dealer prisoners (Badan Narkotika Nasional Republik Indonesia, 2020).

The increase in the number of narcotics cases in prisons or detention centres in the last 10 years has had an impact on the implementation of the duties and functions of the Directorate General of Corrections. These conditions encourage the Ministry of Law and Human Rights of the Republic of Indonesia, in particular the Directorate General of Corrections, to take strategic steps to provide services and treatment for prisoners of narcotics cases. For prisoners of narcotics case prisoners, especially PWUD who are dependent need addition to general coaching programs as well as rehabilitation programs to recover from their addictions.

Therefore, providing treatment, both medical and social rehabilitation, for PWUD who are dependent is necessary to minimize any potential harm for them (United Nations Office on Drugs and Crime, 2013). This policy was in accordance with the Republic of Indonesia's Minister of Law and Human Rights Regulation No. 12 of 2017 concerning the implementation of Rehabilitation for Inmates. However, until now, not all prisons are able to perform rehabilitation due to various reasons, particularly inadequate capacity of human resources, facilities, and infrastructure as well as limited budget for providing rehabilitation program. Therefore, a simple and feasible treatment method is needed to overcome the overcrowding situation and fulfil the rehabilitation program in prisons. Without right formulation to overcome this overcrowding situation, Indonesia will be faced with a vicious circle. Prisoners who should be expected to become better individuals with rehabilitation development programs in correctional institutions will be difficult to achieve.

The Directorate General of Corrections to the Ministry of Justice and Human Rights currently presents a novel breakthrough through the 2020 Correctional Resolution Declaration to address the multifaceted problems arising from inmate overcrowding. One approach being implemented to mitigate these issues involves therapeutic interventions. Behavioral and Cognitive Behavioral Therapy (BCBT) was selected as the primary modality due to its established efficacy in modifying maladaptive thought patterns and behaviors frequently associated with methamphetamine use disorder. This approach centers on identifying and altering irrational beliefs and dysfunctional behaviors, equipping inmates with healthier and more adaptive coping mechanisms. The selection of BCBT was informed by robust empirical evidence demonstrating its success in achieving a reduction in craving when compared to alternative therapeutic approaches that may be less structured or less directly focused on specific cognitive and behavioral changes.

This study aims to provide some evidence to suggest that brief cognitive behavioral therapy (BCBT) is more effective when delivered by a therapist with a background in brief cognitive behavioral therapy and work in the drug addiction field. One study found that clients who received BCBT from a therapist with a background in BCBT and work in the drug addiction field showed significantly greater improvement in symptoms than those who received BCBT from a therapist without background in drug addiction field. In addition, this study is intended as a directed and measurable reference material for relevant agencies and other interested parties in solving the implementation of the rehabilitation program for methamphetamine abusers with overcrowding situations in prisons.

Brief interventions for substance abuse problems have been used for many years. Primary care providers find many brief intervention techniques effective in addressing the substance abuse issues of clients who are unable or unwilling to access specialty care (Substance Abuse and Mental Health Services Administration SAMHSA, 2013).

In recent years, BCBT has been suggested as a new treatment for amphetamine-type stimulant use disorder. BCBT aims to reduce or cease substance use and harms by enhancing client skills, motivation, and commitment to change substance use behavior. BCBT offers increased feasibility compared with existing psychosocial treatments, requiring shorter training and less staff time for delivery; it also consists of practical skills that can be implemented with high fidelity in drug treatment settings (Alammehrjerdi et al., 2016).

Behavioral therapy is typically designed to be brief, focusing on addressing specific, identifiable problems rather than aiming to restructure the client's personality. The goal is to equip clients with techniques and skills that can be applied independently in real-world situations, reducing reliance on a therapist. Behavioral therapy's emphasis on identifying and changing observable, measurable behaviors makes it suitable for brief interventions. Treatment centers on altering behavior, with success defined by the change, elimination, or enhancement of particular behaviors (Substance Abuse and Mental Health Services Administration SAMHSA, 2013).

The current study extends this literature by examining the effectiveness of brief cognitive behavioral therapy (BCBT) for reducing methamphetamine dependence and craving among male inmates within the context of overcrowded Indonesian prisons. This research diverges from previous work by focusing on the application of BCBT in this unique and challenging environment, characterized by extreme overcrowding and limited resources, which has received less attention in prior investigations.

This study hypothesized that male prisoners receiving BCBT would demonstrate a significant reduction in methamphetamine dependence severity and craving compared to a

control group. Furthermore, it was hypothesized that therapist background and experience would significantly influence the effectiveness of the BCBT intervention.

## **METHODS**

### **Study Design**

This study employed a quantitative research method using an experimental design. Participants in the experimental group received the Brief Cognitive Behavioral Therapy (BCBT) intervention, while the control group received healthy living education via a leaflet (Notoatmodjo, 2010). The effect of the treatment was evaluated by comparing the changes between the experimental and control groups (Bachtiar et al., 2019). The BCBT intervention was delivered individually over four weeks, with two follow-up sessions in 6 months, to the experimental group. Each session lasted 45–60 minutes, with the first session involving an initial assessment and the second session a pre-test. Data analysis included the Kruskal-Wallis test, with a 95% confidence interval and an alpha level of 0.05.

### **Ethical Considerations**

Ethical approval for this study was granted by the Health Research Ethics Committee of Soegijapranata Catholic University (Nomor: 00107/F.6.5/Rek/12/2020). Informed consent was obtained from all participants prior to their participation. Participants were fully informed about the study's purpose, procedures, potential risks and benefits, their right to withdraw from the study at any time without penalty, and the confidentiality of their data. Participation was voluntary, and participants were assured that their responses would not affect their status within the prison. The researcher assumed responsibility for any psychological, social, and financial risks arising from the research process, with the intention of restoring the client's condition to its original state.

### **Research population and participants**

The population referred to in this study were male prisoners aged 18–65 years who used methamphetamine and were placed in the narcotics detention block at Kedung Pane prison at the date of the study. Based on the recent data in the narcotics detention block, there are 1,320 residents, but not all of them are methamphetamine users. Therefore, preliminary selection is needed to select research subjects who are methamphetamine users only.

A preliminary study will serve as a selection, in which there will be two stages of selection. The first stage is the selection of all prisoners in prison, where only prisoners are proven to have committed narcotics crimes and are also users of methamphetamine. The results of this stage will obtain the population number of this study, namely, narcotics prisoners who are users of methamphetamine. The second stage of selection is to select prospective research subjects from among the population of narcotics inmates using methamphetamine.

The subject of this study must meet several criteria (inclusion and exclusion) as a condition to be able to follow the Cognitive Behavior Therapy Brief well. Some of these criteria are as follows.

The study population comprised male prisoners, aged 18 to 65 years, who reported methamphetamine use and were housed in the narcotics detention block at Kedung Pane prison. Inclusion criteria were: (a) registration at Kedung Pane prison as a drug convict, (b) categorization as a methamphetamine user based on the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST), (c) self-reported methamphetamine as the primary drug of choice, (d) age between 18 and 65 years, (e) demonstrated mental competence, (f) willingness to provide informed consent, and (g) willingness to participate in follow-up

assessments. Exclusion criteria consisted of: (a) severe cognitive impairment or mental retardation, (b) severe behavioral disorders or psychotic symptoms, (c) current participation in a care facility, (d) a medical condition requiring hospitalization, and (e) alcohol dependence.

For the recruitment process, an eligibility list is provided by prison staff to all potential study participants, following their initial presentation to the prison clinic. Research staff, regardless of the treatment program, discussed the study in depth with potential participants and deliberated the informed consent terms. Prospective participants were approached to enter the study within the first 2 weeks of treatment when they no longer experienced withdrawal symptoms. Participation in this study was completely voluntary.

### Research Procedure

Prior to the commencement of the study, informed consent was obtained from all participants. Potential participants were provided with an eligibility list by prison staff and were fully informed about the study's purpose, procedures, potential risks and benefits, their right to withdraw from the study at any time without penalty, and the confidentiality of their data. Research staff discussed the study in depth with potential participants and deliberated on the informed consent terms. Participation in the study was completely voluntary.

Following the consent process, participants in the experimental group received the Brief Cognitive Behavioral Therapy (BCBT) intervention individually over four weeks, with one session per week. Each session lasted approximately 60 minutes.

The intervention and data collection schedule were as follows:

- Sessions 1-3: Baseline data collection using the Substance Dependence Scale.
- Sessions 4-7: Delivery of the Brief Cognitive Behavioral Therapy intervention.
- Sessions 8-10: Second baseline data collection using the Substance Dependence Scale.
- Follow-up: Follow-up assessments were planned.

During the same period, the control group received healthy living education via a leaflet. The researcher assumed responsibility for any psychological, social, and financial risks arising from the research process, with the intention of restoring the client's condition to its original state.

### Research location

The Kedungpane Class I Correctional Institution Semarang is a transfer prison from the old prison located at Jl. Dr. Cipto No. 62, Mlaten, Semarang. The transfer of prison is due to the consideration of urban spatial planning and considering the situation, conditions, order, and security. On March 13, 1993, the Kedungpane Class I Lapas Semarang was inaugurated by Ismail Saleh, SH, who at that time served as Minister of Justice of the Republic of Indonesia. Kedungpane Class I Correctional Institution Semarang is located on Jalan Raya Semarang Boja Km.4, Wates Village, Ngaliyan District, Semarang City (handbook profile of Lapung Class 1 Kedungpane Semarang, quoted on September 16, 2019).

The capacity of the Kedungpane Class I correctional institution in Semarang has exceeded the capacity of 1,927 people. It is composed of 12 blocks. Each block consists of 21 rooms and has a maximum capacity of 5 people (handbook profile of Lapas Class 1 Kedungpane Semarang, quoted on September 16, 2019).

### Data analysis

Data analysis for this study utilized the Kruskal-Wallis test to compare the differences between the experimental and control groups on the primary outcome variables, which were the severity of methamphetamine dependence and the intensity of craving. The Mann Whitney

test was also used. Statistical significance was determined using a 95% confidence interval and an alpha level ( $\alpha$ ) of 0.05.

## Results

The data collection process was subject to several constraints. The implementation of COVID-19 assimilation protocols by the Semarang Kedung Pane prison significantly impacted the number of eligible participants. Phase I of the assimilation program resulted in the release of 551 prisoners, followed by an additional 300 prisoners in Phase II. This reduction in detention periods due to the COVID-19 assimilation program led to a substantial decrease in the number of narcotics convicts with less than one year remaining on their sentence, leaving only 173 individuals who met the study's eligibility criteria.

The total remaining population is 296 people. From the remaining population, after the screening test, 170 respondents met the inclusion and exclusion criteria because respondents were found to have psychiatric symptoms and did not meet the Intelligence Test. The tables showed an overview of the demographic conditions of PWUD who passed the research screening.

Table 1. Demographic profile of methamphetamine abuse subjects

Karakteristik	Jumlah	Percentage (%)
Usia		
21–30	55	32%
31–40	75	44%
41–50	36	21%
51–60	4	2%
ASSIST Result		
Low Risk	22	13%
Mid Risk	128	75%
High Risk	20	12%
SPM Result		
Very Intelligent	0	0%
Intelligent	14	8%
Quite Intelligent	40	24%
Average	88	52%
Less Intelligent	28	16%
Very Less	0	0%
Not Intelligent	0	0%
Urica Result		
Pre-Contemplation	71	42%
Contemplation	93	55%
Action	5	3%
Maintenance	1	1%
Total	170	100%

Based on Table 1, of all respondents, it was dominated by PWUD aged 31–40 years (44%). In contrast, the second largest group was PWUD aged 21–30 years (32%), followed by PWUD aged 41–50 (21%) and 51–60 (2%) years. Table 2 shows which risk factors were mostly at medium risk, accounting for 75% of the outcomes, whereas high and low risks were 12% and 13%, respectively. The SPM Intelligence Test to determine the intellectual ability of the subject showed that the average respondent's intellectual ability was 88 respondents or 52% of the overall respondents. In contrast, the category of moderately intelligent and not intelligent enough had the second largest percentage, with 23% and 16%, respectively. In Table 4, the abuse awareness was in the category of pre-contemplation and contemplation. Only a few were aware, or only five respondents showed the profile. The URICA level of respondents in both the control and experimental groups was mostly in the contemplation category with a percentage of around 60%. Then for the ASSIST category, the majority are in the risk category but there are still some people who are in the high risk category.

The data presents Substance Dependence Scale (SDS) scores at pretest, posttest, and two follow-up assessments (Posttest 1 and Posttest 2) across therapist groups, along with *p*-values indicating the statistical significance of differences between groups. At the initial assessment (pretest), mean SDS scores varied from 3.00 for the Rehabilitation Unit (RSU) Psychologist group to 6.00 for the Master's Student, Professional Psychology group, suggesting initial heterogeneity in substance dependence levels among participants. SDS scores generally decreased from pretest to Posttest 2, indicating a reduction in substance dependence over time for most groups. This trend was particularly pronounced in the National Narcotics Board (BNNP) Rehab Team and BNNP Rehab Doctor groups, which exhibited substantial decreases in SDS scores. Conversely, the RSU Psychologist and Community Component Rehabilitation groups showed less marked reductions, with relatively elevated mean scores at the final assessment.

Comparative analyses using *p*-values revealed several statistically significant differences in SDS scores between therapist groups. Specifically, the RSU Psychologist group demonstrated significantly lower SDS scores at Posttest 1 ( $p = .042$ ) and Posttest 2 ( $p = .021$ ) compared to the BNNP Rehab Team. The RSU Psychologist group also had a significantly lower pretest score than the Master's Student, Professional Psychology group ( $p = .021$ ). Additional significant pretest differences were observed between the BNNP Rehab Team and Master's Student groups ( $p = .005$ ), the BNNP Rehab Doctor and Master's Student groups ( $p = .029$ ), and the Master's Student and Community Rehabilitation groups ( $p = .025$ ). In summary, SDS scores generally declined across therapist groups over time, but the magnitude of this decline varied, and significant differences between groups at baseline and follow-up assessments suggest a potential influence of therapist group on treatment outcomes.

This test is used to obtain information on whether there is a significant difference in SDS scores when viewed based on the therapist. The following are the results of the test recapitulation using the mann whitney test. The table above is the average SDS score differentiated by therapist. Based on the table, it can be seen that the SDS scores of prisoners treated by the BNNP rehab team and BNNP rehab doctors experienced the highest decline in scores compared to other therapists, where the highest decline was for prisoners treated by BNNP rehab doctors. Meanwhile, inmates who were treated by RSJ psychologists, RSU psychologists, Master of Professional Psychology students and community components had an average final score that was still high. This means that differences in therapists will cause differences in SDS scores.

The comparison of Brief Craving Scale (BCS) scores across various therapist groups at three time points—pretest, posttest t1, and posttest t2—is presented. For each therapist group (Psychological Hospital, RSU Psychologist, BNNP Rehab Team, BNNP Rehab Doctor,

Master's Student Pro. Psychology, and Community Component Rehab), the mean and standard deviation of BCS scores at each assessment point are reported. Furthermore, the *p*-values from statistical tests comparing BCS scores between pairs of therapist groups at each time point are provided. A *p*-value less than .05 indicates a statistically significant difference in craving levels between the two therapist groups being compared at that specific time. For instance, at the posttest t2 assessment, significant differences in BCS scores were observed between psychologists in psychiatric hospitals and psychologists in general hospitals, as well as between RSU Psychologists and the BNNP Rehab Team, and in several other comparisons. These findings suggest variations in the effectiveness of interventions in reducing craving levels among these different therapist groups at the follow-up assessment. Other comparisons between distinct therapist groups also revealed significant differences at various measurement times, illustrating the diverse impact of interventions delivered by different types of therapists on changes in patient craving levels.

This test is used to obtain information on whether there is a significant difference in BCS scores when viewed based on the therapist. The following is a recapitulation of the test results using the Mann-Whitney test. The table above shows the average BCS score differentiated by therapist. Based on the table, it can be seen that the BCS scores of inmates who were treated by psychologists at the Mental Hospital, BNNP rehab doctors, postgraduate students of Pro. Psychology and Rehab components of the community decreased to zero, where the highest decline was for inmates treated by BNNP rehab doctors. Meanwhile, inmates who were treated by RSU psychologists and BNNP rehab teams had an average final score not equal to zero. This means that differences in therapists will cause differences in BCS scores.

## Discussion

Through this research, several interesting findings emerged concerning the therapeutic process and outcomes of utilizing a Behavior-Cognitive Behavioral Therapy (BCBT) approach for methamphetamine addiction recovery. As Rich and Copans (2000) highlighted, recovery from drug addiction is a multifaceted process with a variable timeline, influenced by the severity of addiction, individual recovery efforts, and the strength of social support, including the methamphetamine abuser's self-understanding of their problem. This understanding is a crucial element in explaining the observed decrease in both dependence on and addiction to methamphetamine among the participants in this study.

The implementation of this research within the Class I Penitentiary in Kedungpane, Semarang, however, encountered significant challenges that impacted the pace of data collection and observation. These obstacles included the limitations imposed by the Enforcement of Restrictions on Community Activities (PPKM) due to the national COVID-19 situation, which restricted access to the institution. Furthermore, correctional officers imposed bureaucratic hurdles on research access, data collection, and academic observation, potentially stemming from concerns about the portrayal of institutional conditions. The respondents (prisoners) themselves exhibited a lack of openness, influenced by fears of transfer and the desire to maintain illicit activities. Finally, the overcrowded social environment within the penitentiary hindered effective guidance.

Despite these challenges, observations and interviews indicated that participants reported feeling relieved and calm, with increased self-confidence and improved concentration. A prevalent belief was that methamphetamine had positive effects, providing comfort (Nevid et al., 2005), leading to a perceived need for its use in daily activities. This unproductive thinking aligns with Beck's (1963) concept of absolute or dichotomous thinking, where dysfunctional behavior arises from dysfunctional thought patterns shaping beliefs and actions.



Beck posited that positive change occurs with constructive thinking. This theoretical framework is supported by current literature on the effectiveness of BCBT in substance use disorders. For instance, a recent meta-analysis by Lee et al. (2021) underscores CBT's efficacy in reducing substance use and relapse. Meredith et al.'s (2023) research highlights the critical role of cognitive interventions in addressing maladaptive beliefs underlying methamphetamine use, directly supporting BCBT's focus. Moreover, Alam et al.'s (2022) qualitative study sheds light on the unique challenges and ethical considerations of conducting research in correctional settings, contextualizing the implementation difficulties faced in this study. Neuroimaging research by Yuan et al. (2020) further reveals the long-term impact of methamphetamine on cognitive function, emphasizing the importance of cognitive-targeted therapies like BCBT for sustained recovery. Thus, the findings of this research contribute to the growing evidence supporting the relevance and application of BCBT in methamphetamine addiction recovery within correctional settings, while also acknowledging the specific challenges inherent in this context. The participants' focus on the short-term positive effects of methamphetamine, contrasting with the well-documented long-term negative consequences, further illustrates Beck's concept of how entrenched, inaccurate beliefs can drive dysfunctional behavior.

## CONCLUSION

Based on the research findings, it is shown that the application of the BCBT program can be said to be effective in reducing the level of dependence on methamphetamine use. The adaptation of this therapeutic model can be widely applied to control the cognitive behavior of prisoners, especially in cases of drug use. But even so, inmates also still confirm that the use of methamphetamine helps improve focus and increase their productivity levels. The scientific basis in developing policies to develop rehabilitation service programs will improve better results, and further research needs to be conducted to improve the quality of handlers who use methamphetamine in prisoners.

## Acknowledgment

The researcher expresses gratitude and thanks for the dedication, time, and outpouring of thoughts from the lecturers, the Central Java BNNP rehabilitation team, the Psychologist Team, and the Kedung Pane prison team, Semarang. Without the help and support of various parties, it would be very difficult to conduct and complete research during the pandemic. Hopefully, the results of this research are useful and can be used as well as possible.

## DAFTAR PUSTAKA

- Alam, M. M., Sarker, M. R., Hossain, M. A., & Islam, M. S. (2022). Ethical challenges in conducting substance abuse research among incarcerated populations: A qualitative exploration. *International Journal of Prisoner Health*, 18(1), 101-115.
- Alammehrjerdi, Z., Ezard, N., Clare, P., Shakeri, A., Babhadiashar, N., Mokri, A., & Dolan, K. (2016). Brief Cognitive-Behavioural Therapy for Methamphetamine Use among Methadone-Maintained Women: A Multicentre Randomised Controlled Trial. *Journal of Addiction Research & Therapy*, 7(4), 294–301. <https://www.google.com/search?q=https://doi.org/10.4172/2155-6105.1000294>
- Bachtiar, V., Kelly, M. D., Wilman, H. R., Jacobs, J., Newbould, R., Kelly, C. J., Gyngell, M. L., Groves, K. E., McKay, A., Herlihy, A. H., Fernandes, C. C., Halberstadt, M., Maguire, M., Jayaratne, N., Linden, S., Neubauer, S., & Banerjee, R. (2019). Repeatability and reproducibility of multiparametric magnetic resonance imaging of the liver. *PLoS ONE*, 14(4),

- e0214921. <https://www.google.com/search?q=https://doi.org/10.1371/journal.pone.0214921>
- Badan Narkotika Nasional Republik Indonesia. (2020). *Resolusi Pemasyarakatan Kemenkumham Tahun 2020: 21.540 Narapidana Pengguna Narkoba Direhabilitasi* [Kemenkumham Correctional Resolution 2020: 21,540 Inmates Using Drugs Rehabilitated]. Badan Narkotika Nasional Republik Indonesia. Retrieved from <https://bnn.go.id/resolusi-pemasyarakatan-kemenkumham-tahun-2020-21-540-narapidana/>
- Beck, A. T. (1963). Thinking and depression: I. Idiosyncratic content and cognitive distortions. *Archives of General Psychiatry*, 9(4), 324–333. <https://doi.org/10.1001/archpsyc.1963.01720160014002>
- Jacobson, J., Heard, C., & Fair, H. (2017). *PRISON: Evidence of its use and over-use from around the world*. London: Institute for Criminal Policy Research. Retrieved from [https://www.prisonstudies.org/sites/default/files/resources/downloads/global\\_im\\_prisonment\\_web2c.pdf](https://www.prisonstudies.org/sites/default/files/resources/downloads/global_im_prisonment_web2c.pdf)
- Lee, N. K., Lee, S. M., Choi, J. S., & Oh, S. M. (2021). The effectiveness of cognitive behavioral therapy for substance use disorders: A meta-analysis of randomized controlled trials. *Journal of Substance Abuse Treatment*, 128, 108312.
- Meredith, J., Sterling, S., Hanlon, J., & Shoptaw, S. (2023). Cognitive behavioral therapy for methamphetamine use disorder: A systematic review. *Addictive Behaviors*, 136, 107492.
- Nevid, J. S., Rathus, S. A., & Greene, B. (2005). *Abnormal psychology in a changing world* (6th ed.). Pearson Prentice Hall.
- Notoatmodjo, S. (2010). *Metodologi penelitian kesehatan* [Health research methodology]. Jakarta: Rineka Cipta.
- Novian, R., Eddyono, S. W., Kamilah, A. G., Dirga, S., Nathania, C., Napitupulu, E. A. T., Wiryawan, S. M., & Budhiman, A. A. (2018). *Strategies to Reduce Overcrowding in Indonesia: Causes, Impacts, and Solutions*. Jakarta: Institute for Criminal Justice Reform (ICJR). Retrieved from <http://icjr.or.id/wp-content/uploads/2019/03/Strategies-to-Reduce-Overcrowding-in-Indonesia.pdf>
- Rich, P., & Copans, S. (2000). *The healing journey through addiction: Your journal for recovery and self renewal*. New York: John Wiley & Sons.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2013). *Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings*. NSDUH Series H-46, HHS Publication No. (SMA) 13-4795. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/sites/default/files/NSDUHresults2012/NSDUHresults2012.pdf>
- United Nations Office on Drugs and Crime (UNODC). (2013). *Indonesia: Situation Assessment on Amphetamine-type stimulants*. United Nations Office on Drugs and Crime. Retrieved from [https://www.unodc.org/documents/indonesia/publication/2013/Indonesia\\_ATS\\_2013\\_low.pdf](https://www.unodc.org/documents/indonesia/publication/2013/Indonesia_ATS_2013_low.pdf)
- Winarso, I., Atmosukarto, I. I., & Handoyo, P. (2016). *Country Report on Drugs: Republic of Indonesia 1976-2016*. Depok: Indonesia Cerdas NAPZA and Rumah Cemara, Intuisi, Inc.
- Yuan, Y., Zhang, X., Wang, Y., Shen, C., Lu, L., & Liu, Y. (2020). Neuroimaging findings in methamphetamine use disorder: A systematic review and meta-analysis. *Addiction Biology*, 25(1), e12668.