

Effectiveness of Correctional Institution in Reducing Recidivism in Criminal Justice System

Aishwarya RL Soni

Assistant Professor, Mats Law School, Mats University, Raipur Chhattisgarh, India
Corresponding Author Email: soniaishwarya29@gmail.com

Abstract

In this research, the correctional institution's role in the criminal justice system is explored by applying a quantitative study design. By collecting data from 101 participants through a survey, primary quantitative data has been collected, and its interpretation indicated that housing, employment and addiction management play a crucial role in recidivism prevention. Along with this, post-release support measures seems to have a significant influence on criminal behaviour where institutions play a great role in upholding social inclusion and community guidance values.

Keywords

Correctional Institution, Criminal Behaviour, Criminal Justice, Recidivism, Rehabilitation Programs, Supervision,

INTRODUCTION

The propensity of former offenders to commit another crime is known as an obstinate problem in the criminal justice system, which is generally termed as Recidivism. Recidivism is characterised by the re-arrest, revocation and re-incarceration that have significant implications for society, economy and environment. Released prisoners tend to re-commit crimes, as a large-scale study has tracked 404,638 inmates from 30 states to find that 67.8% of those released prisoners were rearrested within three years and 76.6% were re-arrested within 5 years [1]. The core problem covered in this study is the concessional issues in the correctional system, which is accused of being inefficient and incomplete in terms of rehabilitating offenders due to its focus on custodial containment rather than reintegration.

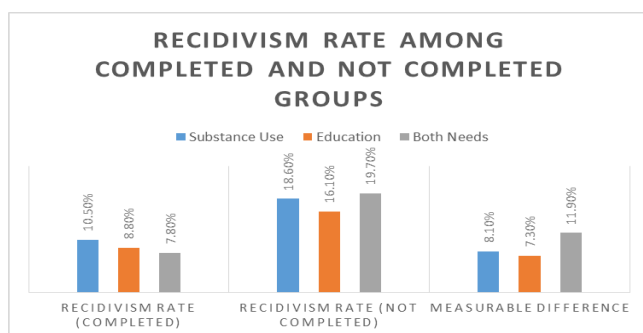


Figure 1. Recidivism Rate among individuals who completed and did not complete correction programs
(Source: Adapted from 2)

Massachusetts Department of Correction (DOC) has shown a positive role of educational programming through correctional recovery academies, demonstrating lower recidivism (10.5% and 8.8%) among people who completed the respective programs [2]. Figure 1 demonstrates how education and substance use programs collectively address

the recidivism issue, but completion is a consistent problem that limits correctional programs.

Therefore, to address the problems, this research is aimed at investigating the role of correctional institutions' intervention on recidivism. The key objectives of this study are

- To assess the role of rehabilitation programs in correcting criminal behaviour
- To evaluate the purpose and significance of educational and vocational training in reducing re-offending practices.
- To explore the contribution of housing, employment and addiction management supports in the prevention of repeat offence.
- To investigate the post-release control measures for parole prisoners.

LITERATURE REVIEW

Rehabilitation Programs and Reduction of Recidivism

Mainly, rehabilitation of offenders and reduced reoffending rates are two of the major goals of the correctional institutions. Rehabilitation theory and the Risk-Need-Responsivity (RNR) Model by Andrews and Bonta constitute the theoretical basis of rehabilitation [3]. In correctional facilities, rehabilitation is a fundamental goal that is associated with the behavioural changes of offenders and averting the scope of repeated critical activities. The majority of the rehabilitation strategies are grounded in the theoretical basis of the risk-need-responsivity model that focuses on the equal level of intervention and risk of the offender by addressing criminogenic needs and individual responsiveness.

However, RNR cannot be applied to real-life recidivism prevention unless the broader systemic inequalities that shape visual opportunities and choices are addressed, restoring justice principles, community-based support, and

psychological care [4]. Existing empirical research reveals that rehabilitation schemes are effective when paired with cognitive behavioural therapy, structured counselling and personalised treatment programmes.

However, the implementation of such programmes often reports discrepancies that limit the effectiveness in preventing recidivism. Due to a lack of structured adoption, recidivism prevention measures lack evidence-based intervention and generate uneven results that lessens its effectiveness. In rehabilitation programmes, short-term behavioural compliance is considered a sign of success instead of a long-term reintegration outcome, which comes after successful positioning within the community and reduction of harm to society [5]. It causes disconnect between reality and performance in the context of actual reduction in recidivism. Therefore, a theoretical framework like RNR develops a significant basis, but practical application is dependent on the program quality and institutional commitment.

Preventive Strategies: Educational and Vocational Training

Educational and vocational training are useful initiatives in reducing recidivism, as this intervention emphasises the Human Capital Theory that takes place in increasing employability through skill and knowledge development among offenders. Based on the RAND Corporation data, prisoners who complete correctional programs are 43% less likely to re-offense than individuals who do not complete [6]. Human capital concepts state that when rehabilitation is not initiated at the institutional level to educate and train inmates to acquire skills and empower them to engage in mainstream society, they tend to lose purpose as society loses human potential [7]. Inmates who have gone through such programmes have demonstrated lower recidivism with increased access to economic activity and social acceptance.

The completion of such programmes is a vital concern in determining the effectiveness of the programmes for individuals. It is often noted that institutional interference, lack of motivation and design problems prevent prisoners from undergoing training [8]. Along with this, the inconsistencies in training programmes with the real labour market requirements are another issue that limits the usefulness of such training. Education and lower recidivism are considered to have statistically significant relationships, but a causal relationship is hard to establish. There is a possibility that individuals undergoing such programs are motivated already, which creates selection bias. This introduces methodological issues regarding the effects of interventions (education and vocational training).

Institutional Environment and Behavioural Change

The other goal is to see where the prison settings play a role in determining recidivism. According to Social Learning Theory (Albert Bandura), the environmental interactions and modelling behaviours determine the behaviour. According to the World Prison Brief, overcrowding in prisons across the

globe continues to be a menace in most parts, which has the potential to hamper the whole rehabilitation process [9]. The prison environment is important in shaping offenders' behaviour as the social learning theory Deposits on the behaviour Changes Caused by the interaction of individuals in a specific environment.

When related to prisons, Social Learning Theory emphasises the unfavourable environment for discouraging criminal behaviour, characterised by overcrowding, violence and absence of supervision. Empirical studies have noted that overcrowded prisons exhibit a high level of negative impacts, such as gang activity, violence/racism, disease spread, stress and minimal rehabilitation outcomes among inmates [10]. This phenomenon of an unfavourable institutional environment corrupts the objectives of behavioural change in a correctional facility by generating counterproductive results.

On the contrary, institutions that favour organised routine staff inmate relationship and procedural fairness are likely to build an environment that would reinforce Favourable Changes in the context of behavioural Improvement. The procedural justice concept is associated with Accepting Compliant behaviour and becoming pro-social when institutional processes are in place for fair and legitimate support. Perception of fairness matters to complaint behaviour among inmates to establish a fair and respectful environment that is conducive to becoming a part of social groups [11]. However, this revelation does not fill the gap in the literature regarding the institutional environment and programme effectiveness relationship, as the majority of the studies overlook their Joint effect.

Post-release Support for Preventing Reoffending

As per the Council of State Governments Justice Centre (United States), prisoners provided with coordinated services of reentry are less likely to commit a crime than their counterparts who have been released without supervision [12]. In the context of reducing reoffending, the role of post-release support is becoming evident. Re-entering a community environment is associated with several troubles for past convicts due to joblessness, homelessness and social stigma. It is often noticed that former inmates relapse into criminal activities due to a lack of social support and opportunity to earn.

This phenomenon is explained with the Social Bond Theory, which emphasises the strong social connection in community behaviour that reduces the chances of reoffending. The availability of accommodation, employment and a social support network can be favourable for former inmates as well as diminish the chance of reoffending. However, there are some systematic deficiencies that hamper the re-entry programme because the majority of these programmes are often fragmented, lack funding, and are not properly coordinated. Moreover, supervision programmes like payroll are more oriented towards compliance checks rather than rehabilitation, thus making an inadequate impact on preventing reoffence in the long run.

This is a gap in existing studies as there are not sufficient longitudinal studies on the long-term effects of post-release support.

METHODOLOGY

Research Design

This research study follows a quantitative structure to complete the research using a cross-sectional design. The foundation of this research investigation is positive philosophy and a deductive approach to derive objective and theory-oriented insights from first-hand information. As per the views of [13] quantitative research grounds the study on specific problems and identifies relevant patterns from numerical data using multiple instruments that would generate unbiased results. The nature of this research study is explanatory as it focuses on finding statistical relationship of different independent variables such as

- Rehabilitation initiatives in correctional institutions.
- Education and training for the accused.
- Supervision and support after the release of convicts.

Sampling

The target population for this survey are professionals and prisoners who are related to the criminal justice system, such as incarcerated individuals, correctional and parole officers, counsellors and defence attorneys. Using purposive sampling techniques, people from the criminal justice system are targeted, given the fact that this strategy is suitable for developing an in-depth understanding of specific areas, which is, in this case, Recidivism [14]. This selective measure has given a sample of 101 participants, whose responses formed the basis of findings relevant to the subject areas by delivering insights through their own experience.

Data Collection

Data collection techniques in this study followed primary sources to receive first-hand insights through a survey among

101 participants selected from the criminal justice system. Primary quantitative data from a pool of respondents shows new trends that can be interpreted for in-depth understanding [15]. Using a questionnaire, the participants have given their responses using a five-point Likert scale, in which neutral, agreement and disagreement responses are core measures of experience. Demographic questions and variable-based questions form the uncertainties, focusing on the key aspects to discover. The survey questionnaire has been distributed electronically to perform a virtual assessment without any paper-based documents.

Data analysis

Primary quantitative data that has been collected from the survey responses is analysed using the statistical method, for which SPSS software has been used, which performs a wide range of tests. After carefully preparing the dataset ready for analysis, statistical tests were performed using descriptive and inferential functions [16]. Descriptive statistics involves mean, median, mode and standard deviation, along with skewness measures that demonstrate the integrity of the statistical model and consistency of the demographic questions. Correlation and regression tests were also performed to achieve inferential statistics that are of high significance in this study, as it aims to build relationships between variables to interpret the key trends.

Ethical Consideration

This research study followed ethical guidelines for research papers such as informed consent and anonymity of the participants. Informed consent has been taken from the sample participants to seek their voluntary engagement, and their anonymity is confirmed as well [17]. They were allowed to exit from the survey at any given time to uphold individual rights. The collected responses have been stored in a password-protected folder to avoid misuse or exploitation of the meaning.

RESULTS

Descriptive Statistics

Table 1. Descriptive Statistics

	1. What is your age group?	2. What is your gender?	3. What is your status in the justice system?	4. Counselling and therapy supports are provided in the correctional institutions	5. Inmates' behaviour improves with their participation in the rehabilitation program	6. Educational programs provide literacy support to reduce the relapse of criminal behaviour	7. Vocational training programmes are targeted to provide employment and purpose to imprisoned people	8. Housing, employment and addiction management supports are given to prevent reoffending among former inmates	9. Post-release control involves regular compliance monitoring under the community supervision regime, especially for prisoners on parole	10. Former inmates can reoffend once released from the correctional institutions, if exposed to negative environment	11. Dedicated correctional plans reduce criminal behaviour by fostering social inclusion, mental health support and employment
N	Valid	101	101	101	101	101	101	101	101	101	101

	Missing	0	0	0	0	0	0	0	0	0	0	0
Mean		2.67	1.69	3.05	3.94	4.15	4.21	4.20	4.04	4.06	4.09	4.11
Median		3.00	2.00	3.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		3	2	4	4	4	4	4	4	4	4	4
Std. Deviation		1.226	.485	1.367	.526	.654	.779	.693	.824	.785	.680	.647
Skewness		.087	-.579	-.163	-3.022	-1.692	-1.550	-1.205	-1.827	-1.750	-2.061	-1.691
Std. Error of Skewness		.240	.240	.240	.240	.240	.240	.240	.240	.240	.240	.240
Kurtosis		-1.058	-.993	-1.228	14.303	7.056	3.861	2.967	4.918	4.856	8.619	7.088
Std. Error of Kurtosis		.476	.476	.476	.476	.476	.476	.476	.476	.476	.476	.476
Minimum		1	1	1	1	1	1	2	1	1	1	1
Maximum		5	3	5	5	5	5	5	5	5	5	5

Descriptive statistics (Table 1) show no missing values, and the mean score ranges between 1.69 and 4.21, which shows a variety of responses but as the majority of the mean is on the higher side, it is implied that respondents agree with the majority of the questions. Median and mode values are also near or equal to 4 which ensures the correctional

situation significantly influences rehabilitation, behavior and support for inmates. However, moderate consistency is visible from the dataset which has a low range of standard deviation compared to the means and with negative skewness, the response seems to incline towards agreements..

Correlation Analysis

Table 2: Correlations

		4. Counselling and therapy supports are provided in the correctional institutions	5. Inmates' behaviour improves with their participation in the rehabilitation program	6. Educational programs provide literacy support to reduce the relapse of criminal behaviour	7. Vocational training programmes are targeted to provide employment and purpose to imprisoned people	8. Housing, employment and addiction management supports are given to prevent reoffending among former inmates	9. Post-release control involves regular compliance monitoring under the community supervision regime, especially for prisoners on parole	10. Former inmates can reoffend once released from the correctional institutions, if exposed to negative environment	11. Dedicated correctional plans reduce criminal behaviour by fostering social inclusion, mental health support and employment
4. Counselling and therapy supports are provided in the correctional institutions	Pearson Correlation	1	.200*	.250*	.060	.236*	.009	.379**	.196*
	Sig. (2-tailed)		.044	.012	.551	.017	.932	.000	.050
	N	101	101	101	101	101	101	101	101
5. Inmates' behaviour improves with their participation in the rehabilitation program	Pearson Correlation	.200*	1	.076	.376**	.100	.080	.285**	.505**
	Sig. (2-tailed)	.044		.449	.000	.318	.426	.004	.000
	N	101	101	101	101	101	101	101	101
6. Educational programs provide literacy support to reduce the relapse of criminal behaviour	Pearson Correlation	.250*	.076	1	.312**	.221*	.061	.210*	.193
	Sig. (2-tailed)	.012	.449		.001	.026	.542	.035	.053
	N	101	101	101	101	101	101	101	101
7. Vocational training	Pearson Correlation	.060	.376**	.312**	1	.196*	.162	.281**	.241*

programmes are targeted to provide employment and purpose to imprisoned people	Sig. (2-tailed)	.551	.000	.001		.049	.106	.004	.015
	N	101	101	101	101	101	101	101	101
8. Housing, employment and addiction management supports are given to prevent reoffending among former inmates	Pearson Correlation	.236*	.100	.221*	.196*	1	.012	.369**	.142
	Sig. (2-tailed)	.017	.318	.026	.049		.907	.000	.156
	N	101	101	101	101	101	101	101	101
9. Post-release control involves regular compliance monitoring under the community supervision regime, especially for prisoners on parole	Pearson Correlation	.009	.080	.061	.162	.012	1	.102	.204*
	Sig. (2-tailed)	.932	.426	.542	.106	.907		.308	.041
	N	101	101	101	101	101	101	101	101
10. Former inmates can reoffend once released from the correctional institutions, if exposed to negative environment	Pearson Correlation	.379**	.285**	.210*	.281**	.369**	.102	1	.069
	Sig. (2-tailed)	.000	.004	.035	.004	.000	.308		.495
	N	101	101	101	101	101	101	101	101
11. Dedicated correctional plans reduce criminal behaviour by fostering social inclusion, mental health support and employment	Pearson Correlation	.196*	.505**	.193	.241*	.142	.204*	.069	1
	Sig. (2-tailed)	.050	.000	.053	.015	.156	.041	.495	
	N	101	101	101	101	101	101	101	101
*. Correlation is significant at the 0.05 level (2-tailed).									
**. Correlation is significant at the 0.01 level (2-tailed).									

Correlation results (Table 2) of the survey responses have shown statistical significance of different variables such as with Pearson Correlation value if .379 counselling and therapy seem to have a role in reducing the intention of committing crimes among foreign inmates. Moreover, Pearson Correlation of .369 demonstrated that social and economic support (housing, employment and addiction

management) are strongly associated with the reduction of recidivism. Post-release control initiatives are also impactful on the prisoner's behaviour, especially those who are on parole ($r = .907$). Therefore, participants perceive post-release support and structural reforms as effective tools for reducing reoffending chances.

Regression

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.539 ^a	.290	.245	.591
a. Predictors: (Constant), Rehabilitation initiatives in correctional institutions, Education and training for the accused, Supervision and support after the release of convicts				

R² value decreased to nearly 29% of the variance explained in the model.

Table 4: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.419	6	2.236	6.413	.000 ^b
	Residual	32.779	94	.349		
	Total	46.198	100			
a. Dependent Variable: Recidivism						
b. Predictors: (Constant), Rehabilitation initiatives in correctional institutions, Education and training for the accused, Supervision and support after the release of convicts						

ANOVA (Table 4) shows a p value of .000 which is lower than the critical value of 0.05; thus, there is no position for the null hypothesis as responses indicate otherwise.

Table 5: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.327	.661		.495	.622
	4. Counselling and therapy support are provided in the correctional institutions	.354	.121	.274	2.927	.004
	5. Inmates' behaviour improves with their participation in the rehabilitation program	.150	.100	.144	1.502	.136
	6. Educational programs provide literacy support to reduce the relapse of criminal behaviour	.023	.083	.026	.276	.783
	7. Vocational training programmes are targeted to provide employment and purpose to imprisoned people	.139	.099	.142	1.407	.163
	8. Housing, employment and addiction management supports are given to prevent reoffending among former inmates	.211	.076	.255	2.781	.007
	9. Post-release control involves regular compliance monitoring under the community supervision regime, especially for prisoners on parole	.053	.076	.061	.692	.491
a. Dependent Variable: Recidivism						

The coefficient table (Table 5) demonstrated the highest significance of counselling therapy (.274) and social and economic measures (housing, employment and addiction support) to be effective on recidivism.

Reliability

Table 6: Reliability Statistics

Cronbach's Alpha	N of Items
.449	11

Cronbach's Alpha value, .449 shown in Table 6, is below the suggested threshold of .70. Therefore, internal consistency is low and the interpretation must be done cautiously.

DISCUSSION

The result of information on the performance of correctional facilities in terms of reducing recidivism, as well as highlighting some weaknesses, must be addressed with improved measures. To begin with, the considerable effects of counselling have been shown to be effective in decreasing the chances of reoffending. The majority of the variables exhibited a mean value between 4.0 and 4.2, which means that the agreement with the statement is dominating the responses, while only a few mean values between 1.6 and 3.0 demonstrate disagreements. Therefore, cognitive and behavioural interventions seem to be effective in behavioural changes that support the concept of the RNR model, in relevance with the prevention of criminal activities with psychological treatments. A consistent statistical trend aligned with the Risk-Need-Responsivity (RNR) model was found in this study that focuses on addressing criminogenic needs using structured psychological interventions that are structured [18]. However, the observed effectiveness from findings may indicate the participants' perception rather than the real behavioural outcome, which shows that further empirical validation is required, especially in the context of a low reliability score (Cronbach's Alpha below 0.70) that shows moderate inconsistency.

Moreover, educational and vocational training programmes have demonstrated a positive correlation with recidivism reduction, but did not statistically establish the proof of reduced recidivism in the regression analysis shown in Table 3. Therefore, the findings are opposite to the prior studies that assert the relevance of skill development in eradicating recidivism, which might indicate the difficulty in implementing the training programme in an institutional setting. Therefore, a possibility of lower completion rate, poor quality of programme and irrelevance of the interventions with the labour market needs to be considered as a barrier to preventing reoffending behaviour.

Another important discovery from this research is the contribution of post-release socioeconomic support to former inmates through accommodation, employment and social inclusion. Dedicated correctional plans have been proven to share a strong relationship with the positive changes in inmates' behaviour in the context of rehabilitation program

participation, as seen in the correlation tests (P value < 0.05). Therefore, it justifies that reintegration is a vital segment of rehabilitation programmes that enhances the effectiveness of interventions through dedicated correctional plans. Inclusion in society, with a job and social identity, prevents criminal behaviour with post-release programmes that have been considered to be useful in preventing reoffending in alignment with social bond theory. This is because it suggests that stable social connections and access to opportunities suppress criminal behaviour [19]. However, contradicting the effectiveness of the post-release programme established in the existing literature, the findings suggest the integration may not be sufficient to support optimal effectiveness in reducing recidivism.

In the context of post-release supervision, such as parole monitoring, it was not found to be the predictor in the regression model despite its strong correlation. It implies that supervision can be useful in conserving compliant behaviour, but its long-term behavioural impact is unsure. This is linked with the critiques in existing literature that argued supervision to be more control-oriented than rehabilitative.

CONCLUSION AND RECOMMENDATIONS

This paper finds that the correctional facilities can minimise recidivism through the effective implementation of rehabilitation efforts and support programs after the release of inmates. Reintegration services such as in-house counselling and therapy sessions along with housing and employment services (most promising) are highlighted as significant tools of providing the greatest contribution to reoffending reduction. However, institutional programs need to be strengthened in future to establish improved coordination to enhance quantifiable influence. Therefore, the following suggestions are given to the correctional institutions to uphold criminal justice system values by optimally reducing recidivism:

- Grow evidence-based counselling and cognitive-behavioural therapy

Standardise and review the delivery of rehabilitation programs so that it is consistent and of high quality.

REFERENCES

- [1] Chloupis, G. and Kontompasi, D., 2025. Examining the relation between education, recidivism & crime prevention. *Discover Global Society*, 3(1), p.18. <https://doi.org/10.1007/s44282-025-00153-0>.
- [2] Mass.gov, 2024. *Massachusetts Department of Correction Recidivism Study Demonstrates Programming Impact on Lasting Rehabilitation*. Available at: <https://www.mass.gov/news/massachusetts-department-of-correction-recidivism-study-demonstrates-programming-impact-on-lasting-rehabilitation> [Accessed on: 27th February 2026].
- [3] Fazel, S., Hurton, C., Burghart, M., DeLisi, M. and Yu, R., 2024. An updated evidence synthesis on the Risk-Need-Responsivity (RNR) model: Umbrella review and commentary. *Journal of Criminal Justice*, 92, p.102197. <https://doi.org/10.1016/j.jcrimjus.2024.102197>.

- [4] Mihăilă, M.M., Gavriluță, C., Dughi, T. and Rad, D., 2025. The Paradigm of Desistance and Correctional Interventions: An Interdisciplinary Approach to Relapse Risk Reduction in Sexual Offenders. *Societies*, 15(4), p.112. <https://doi.org/10.3390/soc15040112>.
- [5] Mathlin, G., Freestone, M. and Jones, H., 2024. Factors associated with successful reintegration for male offenders: a systematic narrative review with implicit causal model. *Journal of Experimental Criminology*, 20(2), pp.541-580. <https://doi.org/10.1007/s11292-022-09547-5>.
- [6] RAND Corporation, 2013. *Evaluating the Effectiveness of Correctional Education*. Available at: https://bja.ojp.gov/sites/g/files/xyckuh186/files/Publications/RAND_Correctional-Education-Meta-Analysis.pdf [Accessed on: 27th February 2026].
- [7] Boateng, W., Boateng, C. and Mensah, R.O., 2025. Stakeholders' Perspectives on Inmates' Education and Vocational Skill Training at Nsawam Medium Security Prison in Ghana. *African Journal of Empirical Research*, 6(1), pp.518-530. <https://doi.org/10.51867/ajernet.6.1.44>.
- [8] McLennan, S., Meyer, L., Wangmo, T., Gaab, J., Elger, B. and Seaward, H., 2025. Psychological stressors of imprisonment and coping of older incarcerated persons: a qualitative interview study. *BMC Public Health*, 25(1), p.328. <https://doi.org/10.1186/s12889-025-21452-w>.
- [9] Prison Studies, 2026. *Changing patterns of imprisonment*. Available at: <https://www.prisonstudies.org/ten-country-prisons-project/changing-patterns-imprisonment> [Accessed on: 27th February 2026].
- [10] Geegbe, D.W., Mbabazize, M., Katuramu, A.O., Barigayomwe, R. and Alloysius, T., 2022. Effects of prison overcrowding on the rehabilitation of inmates in Liberia: A study of Monrovia Central Prison. *British Journal of Psychology Research*, 10(1), pp.1-17. <https://www.academia.edu/download/93012052/vo10.pdf>.
- [11] Van Hall, M., Baker, T., Nieuwbeerta, P. and Dirkzwager, A.J., 2025. Procedural justice spill-over and recidivism after release from prison. *Crime & delinquency*, 71(13-14), pp.4042-4067. <https://doi.org/10.1177/00111287241248104>.
- [12] CSG Justice Centre, 2026. *The Cost of Recidivism: The high price states pay to incarcerate people for supervision violations*. Available at: <https://csgjusticecenter.org/publications/the-cost-of-recidivism/> [Accessed on: 27th February 2026].
- [13] Ghanad, A., 2023. An overview of quantitative research methods. *International journal of multidisciplinary research and analysis*, 6(08), pp.3794-3803. <https://doi.org/10.47191/ijmra/v6-i8-52>.
- [14] Tajik, O., Golzar, J. and Noor, S., 2025. Purposive sampling. *International Journal of Education & Language Studies*, pp.1-9. <https://doi.org/10.22034/ijels.2025.490681.1029>.
- [15] Maida, C.A., Xiong, D., Marcus, M., Zhou, L., Huang, Y., Lyu, Y., Shen, J., Osuna-Garcia, A. and Liu, H., 2022. Quantitative data collection approaches in subject-reported oral health research: a scoping review. *BMC oral health*, 22(1), p.435. <https://doi.org/10.1186/s12903-022-02399-5>.
- [16] Kotronoulas, G., Miguel, S., Dowling, M., Fernández-Ortega, P., Colomer-Lahiguera, S., Bağcıvan, G., Pape, E., Drury, A., Semple, C., Dieperink, K.B. and Papadopoulou, C., 2023, April. An overview of the fundamentals of data management, analysis, and interpretation in quantitative research. In *Seminars in oncology nursing* (Vol. 39, No. 2, p. 151398). WB Saunders. <https://doi.org/10.1016/j.soncn.2023.151398>.
- [17] Wu, C., Wang, N., Wang, Q., Wang, C., Wei, Z., Wu, Z., Yu, S. and Jiang, X., 2024. Participants' understanding of informed consent in clinical trials: A systematic review and updated meta-analysis. *Plos one*, 19(1), p.e0295784. <https://doi.org/10.1371/journal.pone.0295784>.
- [18] Lad, B.B. and Mansukhani, S., 2024. Applying the risk-need-responsivity model in juvenile offender treatment: A conceptual framework. *The Scientific Temper*, 15(spl-2). <https://doi.org/10.58414/SCIENTIFICTEMPER.2024.15.spl-2.04>.
- [19] Humphrey, T., Li, G. and Gibbs Van Brunschot, E., 2024. The road to desistance: The relationship between formal institutions of social control, informal social bonds, and intermittency in offending. *Deviant Behavior*, 45(5), pp.656-674. <https://doi.org/10.1080/01639625.2023.2260926>.