

Role of Surveillance Technology in Countering Prison Radicalization in Kenya: Some Conceptual Issues

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Abstract

Original Research Article

Radicalization within prisons is a growing global security concern, particularly among high-risk inmates vulnerable to extremist ideologies. In Kenya, prisons have increasingly become focal points for terrorist gang recruitment and activity, threatening both prison rehabilitation efforts and national security. This study investigated the role of surveillance technology in countering radicalization within Kenyan prisons, with specific objectives to assess its effectiveness, explore mechanisms for improving its utility, and identify associated challenges. Grounded in routine activity theory and rational choice theory, the study employed a descriptive survey design. Data collection involved questionnaires and key informant interviews targeting 306 prisoners and 21 surveillance officers respectively. Quantitative data were analyzed using descriptive statistics while qualitative data were analyzed thematically and presented using quotes and verbatim narratives. The study revealed that surveillance technology has enhanced security and curbed terrorist-related activities in prisons, although its influence on policy was debated. Training and smartphone use were deemed essential for maximizing effectiveness. However, concerns about privacy, vandalism, and limited coverage remain challenges. The study recommends expanding training for officers to boost technical capacity and enhance the strategic use of surveillance tools in counter-radicalization efforts within the prison system.

Keywords: Surveillance Technology, Countering Prison Radicalization, Kenya.

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INTRODUCTION

The emergence of prison radicalization as a security challenge has prompted considerable scholarly and policy interest worldwide. Prisons, originally intended for rehabilitation and deterrence, have paradoxically evolved into breeding grounds for extremist ideologies. Globally, researchers have established that incarcerated individuals, especially those serving sentences for terrorism-related offenses, often use their time in confinement to radicalize others and build extremist networks (Brandon, 2009; Silke, 2020). This transformation has shifted the attention of security agencies from traditional modes of surveillance to more sophisticated and technology-driven approaches. Surveillance technology is thus increasingly being viewed not only as a tool for control but also as a preventive mechanism within correctional institutions.

In Kenya, the threat of prison radicalization has been amplified by rising cases of youth radicalization and the persistent activities of extremist groups such as Al-Shabaab (Anderson & McKnight, 2014). Kenyan

prisons, like many others across Africa, face the dual challenge of overcrowding and limited personnel, which reduces their capacity to effectively monitor inmates' activities. The socio-economic background of many prisoners, coupled with ideological vulnerability, renders them prime targets for radical recruiters. Recognizing this, the Kenyan government has introduced various security reforms under the Prevention of Terrorism Act (2012) and has implemented surveillance technologies to mitigate radical influence behind bars (Republic of Kenya, 2012).

Surveillance technologies commonly used in Kenyan prisons include closed-circuit television (CCTV), biometric access systems, digital audio monitors, and GPS tracking systems. These tools are intended to supplement manual supervision, particularly in sensitive areas such as communal spaces, worship halls, and workshops where radical preaching and networking are likely to occur (Lyon, 2007). Despite these advancements, questions persist regarding the actual effectiveness of these systems in detecting and

disrupting radical activities. Surveillance without trained personnel or policy backing often leads to passive monitoring, which does little to prevent the proliferation of extremist ideologies (Mueller & Stewart, 2011).

The effectiveness of surveillance technology in prison settings also depends on the integration of intelligence data, proactive inmate profiling, and real-time monitoring (Omand, 2014). Law enforcement officers must be equipped not only with the technical know-how but also with sociological and psychological skills to interpret behavioral patterns suggestive of radicalization. Scholars argue that a purely technological approach is insufficient in isolation and must be complemented by a human-centric strategy rooted in engagement and rehabilitation (Woo, 2006; Fagerlin, 2010). This calls for an interdisciplinary approach combining criminology, security studies, psychology, and information technology.

The theoretical underpinning of this study is based on routine activity theory and rational choice theory. Routine activity theory, developed by Cohen and Felson (1979), emphasizes the convergence of three elements—motivated offenders, suitable targets, and the absence of capable guardians—as central to the occurrence of crimes. In the context of prison radicalization, surveillance technology functions as a ‘capable guardian’ by monitoring, recording, and alerting authorities about suspicious behaviors. Rational choice theory, on the other hand, posits that individuals make decisions based on a calculated assessment of risks and rewards (Clarke & Cornish, 1986). When inmates perceive a higher likelihood of detection due to surveillance, the cost of engaging in radical activities increases, thereby acting as a deterrent.

Nevertheless, empirical data on the role of surveillance technology in countering prison radicalization in Kenya is limited. While there is growing anecdotal evidence of success stories, academic literature remains sparse and fragmented. Existing studies focus largely on broader counter-terrorism strategies, with little emphasis on how surveillance technologies function in carceral environments (Kinyanjui, Mwangi & Mwaeke, 2021). This gap underscores the need for focused academic inquiry into the specific challenges, successes, and limitations of these technologies in the Kenyan context.

Another dimension worth considering is the ethical implications of surveillance in correctional institutions. While surveillance is essential for security, it also raises fundamental concerns about privacy and human dignity (Lyon, 2007). The prison setting, by nature, imposes numerous restrictions on personal freedom. Excessive monitoring—especially when it includes audio surveillance or biometric tracking—may constitute a violation of inmates' rights. These ethical

concerns must be balanced against the imperative of maintaining institutional and national security, particularly in the face of growing extremist threats (Amicelle, 2011).

Given these complexities, this study seeks to contribute to the existing body of knowledge by systematically investigating the role of surveillance technology in countering radicalization in Kenyan prisons. By employing both quantitative and qualitative methods, the study explores not only the efficacy of these technologies but also their social, psychological, and operational implications. The findings aim to inform policy-makers, prison administrators, and academic stakeholders on best practices and areas for reform, ensuring that surveillance contributes to both security and rehabilitation.

METHODOLOGY

This study employed a descriptive survey research design to explore the role of surveillance technology in countering prison radicalization in Kenya's correctional facilities. The descriptive survey design was deemed appropriate as it allowed for both the collection and analysis of quantitative and qualitative data, thus facilitating a comprehensive understanding of the phenomenon under investigation. The approach was particularly useful in examining the perceptions, experiences, and attitudes of key stakeholders including prison inmates, surveillance officers, and administrators concerning the use of surveillance technology in detecting and curbing radicalization within prison settings.

The study population comprised approximately 1,500 inmates and an undisclosed number of surveillance officers working within Kenyan prisons. To ensure a representative sample, a stratified random sampling technique was employed in selecting 306 prisoners. Stratification was based on variables such as gender, security classification, age, length of sentence, and religious affiliation. This method ensured that diverse inmate perspectives were captured, thereby enhancing the validity of the findings. Additionally, 23 surveillance officers were selected based on their direct involvement with the operation and monitoring of surveillance systems. To enrich the qualitative aspect of the study, 21 key informants—including senior prison administrators, intelligence officers, and rehabilitation experts—were purposively sampled for in-depth interviews due to their specialized knowledge and insight into the research topic.

Multiple data collection methods were employed to obtain a robust dataset. Structured questionnaires were administered to inmates and surveillance officers to gather quantitative data on their experiences, knowledge, and attitudes toward the use of surveillance technologies. These instruments included

closed-ended and Likert-scale questions that allowed for standardized responses. Semi-structured interview guides were used to conduct qualitative interviews with the key informants, enabling the collection of nuanced and in-depth perspectives on the successes and limitations of current surveillance mechanisms. Document analysis was also conducted using existing prison reports, policy documents, and strategic counterterrorism frameworks to contextualize the empirical findings and align them with national correctional goals.

The analysis of the quantitative data was conducted using the Statistical Package for the Social Sciences (SPSS), a reliable software that facilitated the computation of descriptive statistics such as means, frequencies, and percentages. Results from the quantitative data were visually presented using frequency tables, pie charts, and bar graphs to aid in interpretation and comparison. The qualitative data were analyzed thematically using NVivo software, which allowed for systematic coding and categorization based on emerging themes aligned with the study objectives and theoretical framework. This dual-method approach ensured triangulation of data and provided a more holistic view of the research problem.

The study paid close attention to ethical considerations to protect the rights and welfare of the participants. Informed consent was sought from all participants after clearly explaining the purpose, procedures, potential risks, and benefits of the study. Participation was voluntary, and respondents were informed of their right to withdraw at any point without any consequences. Anonymity and confidentiality were guaranteed through the use of pseudonyms and restricted access to the collected data. Ethical approval for the study was obtained from the National Commission for Science, Technology and Innovation (NACOSTI), ensuring that the research adhered to national and international ethical standards. The correctional institution's authorities were also engaged to secure permissions and logistical support.

RESULTS

Findings from the study revealed that surveillance technology significantly contributes to enhanced prison security and reduced opportunities for extremist activity. The installation of closed-circuit television (CCTV) in strategic areas within prison facilities—such as cell corridors, dining halls, recreational areas, and visitation zones—has enabled continuous observation of inmate behavior. This form of visual monitoring has helped deter physical confrontations, monitor movement patterns, and detect suspicious congregations of inmates, particularly in areas prone to covert radical activities (Kahara, 2017). Respondents indicated that the mere presence of surveillance cameras often acts as a psychological

deterrent, discouraging inmates from engaging in overt acts of violence or proselytization.

Biometric access control systems also played a pivotal role in improving institutional security. These systems track the movements of both inmates and staff, ensuring that only authorized individuals gain access to specific zones. This has helped to restrict unauthorized gatherings, which often serve as incubation points for ideological indoctrination, religious extremism, and radical mobilization (Lyon, 2007). Moreover, data from biometric systems has assisted in reconstructing events during post-incident investigations, thereby reinforcing accountability and transparency in prison management. However, respondents noted that the effectiveness of surveillance technologies was often undermined by various operational and logistical challenges. One of the most prominent issues was inadequate infrastructure. Many surveillance systems were found to have limited coverage, with blind spots in crucial areas such as bathrooms, infirmaries, and religious prayer halls. These blind spots present serious security vulnerabilities as they provide extremists with spaces to propagate ideologies without detection. Furthermore, many cameras lacked night vision capabilities, rendering them ineffective in low-light conditions and during power outages, which are frequent in some prison facilities.

Another significant limitation identified was the rampant vandalism of surveillance equipment. Inmates, particularly those with technical know-how or ties to radical networks, have been known to tamper with or disable surveillance tools. This is especially prevalent in unsupervised sections of the facility or where maintenance protocols are weak (Monahan & Palmer, 2009). Some correctional officers admitted that the lack of regular technical inspections and the absence of deterrent penalties for vandalism reduced the longevity and efficiency of these systems. These issues underscore the need for durable, tamper-resistant hardware and clear punitive policies to safeguard surveillance infrastructure.

Training gaps among prison personnel also emerged as a critical challenge. The study found that while technology had been introduced in many facilities, the personnel operating these tools often lacked the technical expertise required for optimal use. Many officers were not adequately trained in identifying indicators of radicalization or in interpreting behavioral cues captured through surveillance systems. This deficiency limited the proactive use of surveillance technology in intelligence gathering and threat analysis. There was a consensus among informants that continuous capacity-building initiatives and in-service training sessions are necessary to equip officers with the skills to fully leverage the installed technologies.

Privacy and human rights concerns were also significant themes in the responses collected. Several

inmates and civil society groups expressed apprehension about the invasive nature of 24-hour surveillance, arguing that it impinges upon the basic rights of prisoners. In particular, constant audio and visual monitoring in spaces such as wards and common areas were described as psychologically oppressive (Woo, 2006). Human rights activists contend that while surveillance is essential for security, it should not be implemented in ways that compromise dignity, rehabilitation, and mental well-being. These concerns highlight the delicate balance between ensuring institutional security and respecting inmates' constitutional rights (Regan & Monahan, 2013).

Moreover, the study established that while surveillance technologies are effective in capturing overt behaviors, they often fall short in identifying the covert processes of radicalization. Ideological grooming, according to several interviewees, often takes place during informal conversations, coded language exchanges, and religious study sessions that may not raise immediate suspicion. In such instances, surveillance systems lack the cognitive capabilities to interpret context or intention. Consequently, the integration of technology with human intelligence—such as psychological profiling, informant networks, and behavioral risk assessments—is critical to enhancing detection and prevention (Coker, 2015; Omand, 2014).

Finally, a significant number of prison officials recommended the integration of more advanced tools such as smartphone surveillance applications, geofencing, and artificial intelligence (AI)-powered analytics. These innovations, they argued, would allow for real-time detection of suspicious behavior patterns, instant alerts to command centers, and predictive modeling of radicalization risks. AI technologies, for example, could be trained to identify emotional distress, repetitive ideological keywords in conversations, or anomalous social behavior within the prison setting. Such tools would augment current surveillance systems and provide actionable intelligence for timely intervention, ultimately strengthening the national counter-radicalization framework within correctional environments.

CONCLUSION

This study critically examined the role of surveillance technology in countering prison radicalization in Kenya. The analysis established that while technological tools such as CCTV cameras, biometric access control systems, and GPS tracking contribute significantly to enhancing prison security and disrupting extremist activities, their success is heavily dependent on the availability of adequate infrastructure, well-trained personnel, and ethical oversight. These technological interventions have helped correctional institutions monitor inmate behavior, prevent unauthorized gatherings, and detect early signs of

radicalization, thereby strengthening internal security systems.

Nonetheless, the findings demonstrate that surveillance alone cannot eliminate the problem of radicalization within prisons. Technology provides a structural framework for observing and recording behavioral patterns, but it lacks the cognitive sensitivity to interpret ideological motivations, covert recruitment tactics, and emotional vulnerabilities among inmates. The absence of human judgment and psychological assessment in purely technological approaches limits the scope of intervention, particularly in identifying subtle and evolving forms of extremism. It is evident that surveillance systems must be integrated into a wider, multifaceted deradicalization strategy. Such a strategy should encompass educational programs aimed at challenging extremist ideologies, religious counseling to offer alternative spiritual guidance, vocational training to prepare inmates for productive reintegration into society, and comprehensive rehabilitation programs to address underlying social and psychological grievances. This holistic approach ensures that inmates are not only monitored but also guided towards positive behavioral transformation.

Moreover, the institutionalization of surveillance technologies must be guided by clear ethical standards. Correctional facilities must strive to balance the need for security with respect for human dignity. Excessive or invasive surveillance practices, especially in sensitive areas, can lead to resentment, psychological distress, and a sense of oppression among inmates. To prevent such outcomes, surveillance systems must operate transparently, and their implementation must be subject to legal and institutional accountability mechanisms. The study also highlighted the importance of continuous training and professional development for prison personnel. The ability to interpret surveillance data accurately, respond to security threats promptly, and engage with inmates constructively depends on the competence and preparedness of staff. Investing in the capacity-building of prison officers is therefore crucial for optimizing the utility of surveillance tools.

In conclusion, while surveillance technology serves as an indispensable component in the fight against prison radicalization, it should be understood as one part of a larger strategy that addresses the root causes of radical behavior. A successful approach requires the fusion of technology, human intelligence, rehabilitative programming, and ethical oversight. Only through this integrated framework can Kenyan prisons hope to curb the spread of extremist ideologies and transform inmates into reformed and productive members of society.

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