Building New Hope for Drug Addicts through an Educational Ecosystem: A Rehabilitation Study of Drug Abuse Victims at the NAPZA Islamic Boarding School

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ABSTRACT. Drug abuse is a multidimensional phenomenon that produces extensive impacts on health, psychological well-being, and social integration. Conventional rehabilitation models often struggle to provide long-term, holistic environments that support sustained recovery. This study explores pesantren-based rehabilitation as an alternative recovery ecosystem by examining the rehabilitation process for drug abuse victims at Pondok Pesantren Al-Islamy, Kulon Progo, Yogyakarta. Employing a qualitative intrinsic case study Design, data were collected through in-depth interviews, participant observation, and document analysis involving rehabilitated students, kyais, teachers, and rehabilitation companions. Data were analyzed using an interactive qualitative study model within a multidisciplinary theoretical framework integrating ecological, psychological, educational, sociological, and neurobiological perspectives. The findings reveal that pesantren-based rehabilitation operates as a structured socio-religious ecosystem that facilitates behavioral change, cognitive and emotional transformation, spiritual development, and identity reconstruction. Key mechanisms include strict daily routines, collective religious practices, social modeling, and community-based learning, which together support self-regulation and reduce relapse risk. The pesantren environment fosters the development of recovery capital by providing strong social support, spiritual meaning, and communal belonging, enabling rehabilitated individuals to transition from stigmatized identities as drug users to socially legitimate identities as santri. However, the study also identifies challenges related to post-rehabilitation reintegration, highlighting the need for sustained support beyond the pesantren setting. This study concludes that pesantren-based rehabilitation represents an effective, culturally grounded, and holistic model for long-term addiction recovery. By integrating educational structure, spiritual guidance, and community support, pesantren function as transformative recovery ecosystems that offer significant implications for addiction rehabilitation policy and practice in Indonesia.

Keywords: *Drug Rehabilitation, Pesantren Based Rehabilitation, Recovery Ecosystem, Addiction Recovery*

INTRODUCTION

Drug abuse is a multidimensional phenomenon that exerts wide-ranging impacts on public health, economic stability, and social integration. Beyond its direct consequences on physical and mental health, substance abuse contributes to increased healthcare costs, reduced productivity,

family disintegration, and broader social instability (Erkomaishvili, 2024). Data from the Indonesian National Narcotics Agency (BNN) indicate that the prevalence of drug users in Indonesia exceeded 3.3 million individuals in 2023, with a particularly alarming upward trend among adolescents and young adults, a demographic group that is developmentally vulnerable and socially strategic for the nation's future (*BNN Chief Reveals Drug Prevalence in Indonesia Reached 3.3 Million in 2023 | INP | Indonesian National Police*, n.d.; Handayani & Utari, 2024). This situation underscores the urgent need for effective, sustainable, and culturally responsive rehabilitation models that extend beyond short-term clinical interventions (Aziz et al., 2024; Rohmah et al., 2023; Zarkasi et al., 2024).

From a scientific perspective, addiction is widely understood as a chronic disorder of the central nervous system that disrupts self-control, motivation, emotional regulation, and the brain's reward system. Neurobiological research demonstrates that prolonged substance use alters dopaminergic pathways and impairs executive functioning, making individuals more susceptible to compulsive behavior and relapse even after periods of abstinence (Volkow et al., 2016). These findings reinforce the view that addiction is not merely a moral or behavioral failure, but a complex biopsychosocial condition that requires continuous, long-term, and multidimensional rehabilitation strategies rather than isolated or episodic treatment efforts (Bolton & Gillett, 2019; Porcelli et al., 2007).

At the social level, individuals with substance use disorders often experience profound stigma, social exclusion, and the erosion of interpersonal relationships with family, peers, and the wider community. Such marginalization frequently undermines self-esteem, limits access to social support, and increases the risk of relapse. Consequently, a growing body of research emphasizes the central role of recovery capital encompassing social networks, spiritual resources, personal competencies, and community support systems in sustaining long-term recovery (Best et al., 2016). Despite this, many formal rehabilitation institutions remain constrained by time-limited programs, clinical fragmentation, and insufficient integration of social and spiritual dimensions, which limits their capacity to provide a stable, intensive, and holistic recovery environment.

In this context, Islamic boarding schools (*pesantren*) emerge as strategically significant institutions (Abas et al., 2025; Happyana et al., 2025; Iskamar et al., 2025; Karman et al., 2025; Tamjidnor et al., 2025). As socio-religious educational ecosystems, pesantren offer a distinctive combination of structured daily routines, behavioral regulation, moral and spiritual guidance, and immersive communal living (Arif et al., 2024; R & Kamil, 2025; Yamin, 2023). These features create an environment characterized by consistency, supervision, and shared values, which are particularly conducive to behavioral change and identity reconstruction (Abidin et al., 2025; Madkan et al., 2025; Prameswari & Suryani, 2023). The pesantren model aligns closely with Bronfenbrenner's ecological systems theory, which emphasizes the role of proximal environments in shaping behavior, as well as with Social Learning Theory, Routine Activity Theory, and Transformative Learning theory, all of which highlight the importance of structured interaction, role modeling, and reflective meaning-making in sustaining change (Athoillah et al., 2024; Rofiq et al., 2024). Moreover, the highly structured nature of pesantren life provides a low-risk setting that helps individuals in recovery minimize exposure to relapse triggers while rebuilding self-regulation and discipline.

Although pesantren have historically functioned as centers for character education, moral formation, and community-based learning, systematic empirical research examining their effectiveness as institutions for drug rehabilitation remains relatively limited (Baihaqi et al., 2023; Sugiono et al., 2024). Existing studies tend to focus on clinical or policy-oriented approaches, leaving the socio-educational and spiritual mechanisms of pesantren-based rehabilitation underexplored. Therefore, this study aims to comprehensively analyze the rehabilitation processes embedded within the pesantren educational ecosystem by integrating interdisciplinary perspectives from psychology, education, sociology, and health sciences. By doing so, the study

seeks to contribute theoretically and empirically to the growing discourse on community-based and faith-informed models of addiction recovery, particularly within the Indonesian context.

METHOD
Research Design and Approach

This study adopts a qualitative approach employing an intrinsic case study design. A qualitative approach is selected because it enables the researcher to explore meanings, subjective experiences, and behavioral change processes among rehabilitated students (*santri rehabilitan*) in a deep and contextualized manner. This approach aligns with the phenomenological perspective, which emphasizes lived experience, as well as with the constructivist paradigm that views social reality as a product of shared meaning-making processes (White & Cooper, 2022).

The case study design is considered appropriate because pesantren-based NAPZA rehabilitation represents a complex social phenomenon shaped by the interaction of structural, cultural, spiritual, and relational dimensions. Methodologically, this research is consciously integrated with a multidisciplinary theoretical framework. Bronfenbrenner's Ecological Systems Theory is employed as a macro-level lens to understand the pesantren as a multilayered environmental system shaping individual behavior (Bronfenbrenner, 1979). Social Learning Theory and the concept of Communities of Practice guide the analysis of social learning processes, gradual participation, and behavioral modeling within pesantren life. Meanwhile, the Neurobiological Model of Addiction, Cognitive Behavioral Theory, and the Transtheoretical Model of Change are utilized to interpret neuropsychological dynamics, cognitive restructuring, and the staged nature of addiction recovery as a continuous and sustainable process.

This theoretical integration ensures that data collection and analysis are not merely descriptive but analytical and theory-driven. The approach corresponds directly with the healing and rehabilitation processes implemented by Pondok Pesantren Al-Islamy Kaibawang Kulon Progo in addressing substance abuse recovery among its students.

The study was conducted at Pondok Pesantren Al-Islamy, located in Kulon Progo Regency, Yogyakarta, Indonesia. Specifically, the research took place at an Islamic boarding school that functions as a NAPZA rehabilitation pesantren. The site was selected purposively due to its faith-based rehabilitation program, communal living structure, and the active involvement of *kyai* and mentors as central actors in the recovery process.

Theoretically, this pesantren represents a therapeutic community in the sense articulated by (Hoch, 1961) as well as a socio-religious ecosystem relevant for examining recovery propositions grounded in social capital, spirituality, and community-based support systems.

Data Collection Techniques and Instruments

Informant selection in this study employed purposive sampling and snowball sampling techniques. Primary informants included rehabilitated students, *kyai*, *ustaz*, mentors, and counselors directly involved in the rehabilitation process. The selection of rehabilitated students considered variations in recovery stages based on the Transtheoretical Model of Change, allowing experiences from early recovery to maintenance phases to be comprehensively represented. This strategy aligns with the principle of theoretical sampling in qualitative research (Patton, 2014).

Data collection techniques consisted of in-depth interviews, participant observation, and document analysis. In-depth interviews served as the primary method to explore subjective narratives of rehabilitated students concerning identity transformation, meaning-making, and spiritual experiences. This approach is consistent with Meaning-Making Theory, Narrative Identity Theory, and existential psychology, which emphasize the central role of meaning in psychological recovery.

Participant observation was employed to examine behavioral modeling, social control mechanisms, and habit formation through pesantren routines, in accordance with Social Learning Theory, Social Control Theory, and principles of behavioral conditioning. Documentation

analysis complemented the understanding of pesantren structures, norms, and institutional regulations as a therapeutic community.

Data Analysis Techniques

Data analysis was conducted using the interactive model developed by (Miles et al., 2014) which consists of three concurrent and iterative processes: data reduction, data display, and conclusion drawing and verification. This model enables systematic, reflective, and contextual interpretation of qualitative data throughout the research process.

During the data reduction phase, initial coding was conducted by linking empirical themes to theoretical constructs such as self-efficacy, recovery capital, coping skills, and social identity. Data display was achieved through thematic matrices that mapped relationships between field findings and theoretical perspectives. Verification involved cross-informant pattern comparison to generate middle-range theoretical propositions.

Trustworthiness of the Data

Data trustworthiness was ensured through the application of credibility, transferability, dependability, and confirmability criteria. Credibility was established through source and method triangulation, as well as member checking to confirm the alignment between researcher interpretations and participants' lived experiences. Transferability was strengthened through rich, thick descriptions of pesantren life, enabling readers to assess the applicability of findings to comparable contexts.

Dependability and confirmability were maintained through the development of an audit trail and researcher reflexivity, consistent with interpretative qualitative research traditions.

RESULT AND DISCUSSION
Result

The findings of this study are derived from qualitative field research conducted at the NAPZA Islamic Boarding School, employing in-depth interviews, participant observation, and document analysis. The presentation of findings is organized thematically to demonstrate how the pesantren operates as an integrated educational ecosystem that fosters rehabilitation, identity reconstruction, and the emergence of new hope among drug abuse victims.

The NAPZA Islamic Boarding School as an Integrated Educational Ecosystem

Field data indicate that rehabilitation at the NAPZA Islamic Boarding School is embedded within a holistic educational ecosystem that integrates religious instruction, behavioral discipline, social interaction, and emotional support. Rather than functioning solely as a treatment facility, the pesantren provides a living-learning environment that continuously shapes participants' cognitive, emotional, and moral development.

One participant described this environment as transformative:

"This place is not like a rehabilitation center I knew before. Here, learning happens all the time through prayer, study, work, and interaction with others. That is what slowly brought hope back to my life." *(Interview with Rehabilitated Student P1, March 2025)*

Observational data confirm that educational processes extend beyond the classroom into everyday practices such as communal worship, collaborative work, and mentoring sessions. These activities were documented through daily schedules, attendance records, and field notes, illustrating the pesantren's role as a continuous educational ecosystem.

Educational Discipline and the Formation of Hope

A central theme emerging from the data is the role of structured educational discipline in cultivating hope and psychological stability among rehabilitated students. Participants consistently emphasized that predictable routines and clear expectations helped them regain control over their lives.

As one rehabilitated student explained: "*Before coming here, I felt my future was over. The discipline here waking up early, studying, praying made me feel that my life could be rebuilt step by step.*"*(Interview with Rehabilitated Student P2, March 2025)*

Participant observation shows that structured routines reduce anxiety and uncertainty, particularly during early rehabilitation stages. This finding is supported by institutional documents, including the pesantren's rehabilitation curriculum and daily activity guidelines, which explicitly frame discipline as an educational rather than punitive strategy.

Learning through Role Models and Communal Practices

The educational ecosystem of the NAPZA Islamic Boarding School relies heavily on social learning through role modeling. Rehabilitated students identified teachers (*ustadz*), caregivers, and senior students as primary sources of moral guidance and behavioral learning.

One participant stated:

"No one forces us with harsh rules. We learn by seeing how the ustadz live their lives. That example teaches us more than lectures." *(Interview with Rehabilitated Student P3, April 2025)*

Field observations corroborate this statement, showing that values such as self-control, responsibility, and spiritual commitment are transmitted implicitly through communal activities. These processes were documented through observation logs and mentoring reports, highlighting the pesantren's emphasis on experiential learning.

Spiritual Education and Cognitive Emotional Transformation

Interview data reveal that spiritual education plays a crucial role in transforming participants' cognitive and emotional orientations. Regular practices such as Qur'anic study, *muhasabah* (self-reflection), and collective worship encouraged participants to reinterpret their past experiences and envision a more meaningful future.

One rehabilitated student reflected: "*Through religious learning, I realized that my past does not define my future. I began to believe that God still gives me another chance.*" *(Interview with Rehabilitated Student P4, April 2025)*

This transformation is supported by documented spiritual programs, including lesson plans, sermon outlines, and written reflection notes collected during the study. These documents demonstrate how spiritual education contributes to rebuilding self-worth and hope.

Identity Reconstruction and Social Recognition

Identity reconstruction emerged as a significant outcome of the rehabilitation process. Participants described a shift from stigmatized identities associated with drug abuse toward positive identities as learners (*santri*) and community members.

As one participant expressed: "*Here, I am treated as a student, not as a criminal or an addict. That makes me believe I can become someone better.*" *(Interview with Rehabilitated Student P5, April 2025)*

Observations during communal rituals, educational evaluations, and graduation ceremonies show that social recognition reinforces this new identity. These moments were recorded through event documentation, certificates, and participant lists, providing concrete evidence of identity affirmation within the educational ecosystem.

Sustaining Hope beyond the Pesantren Environment

While the pesantren-based educational ecosystem effectively nurtures hope during rehabilitation, both interview and observational data indicate ongoing challenges during reintegration into broader society. Participants expressed concern about maintaining discipline and optimism once they leave the structured environment.

One mentor noted: "*Hope grows here, but it must be protected when they return to society. That is why we emphasize continuous learning and alumni support.*" *(Interview with Mentor M1, April 2025)*

This finding is supported by program documents on alumni mentoring and post-rehabilitation guidance, highlighting the pesantren's commitment to sustaining hope beyond the institutional setting. These findings demonstrate that the rehabilitation process at the NAPZA Islamic Boarding School is best understood as an educational ecosystem that constructs new

hope through continuous learning, social interaction, and spiritual formation, as evidenced by interviews, observations, and institutional documentation.

Discussion

This study demonstrates that pesantren-based rehabilitation operates as a comprehensive educational and socio-religious ecosystem capable of facilitating sustained recovery from substance abuse. Empirical findings indicate that recovery within the pesantren context is not produced by a single therapeutic technique or disciplinary mechanism, but rather emerges from the dynamic interaction of structural, psychological, social, spiritual, and neurobiological processes (Azizah et al., 2025; Muzayana, 2024; Ramadhan & Albab, 2025). These interrelated mechanisms function synergistically and can be systematically explained through the integration of multidisciplinary theoretical frameworks drawn from psychology, education, sociology, and health sciences. Such integration highlights the uniqueness of pesantren as an immersive recovery environment that extends beyond conventional clinical rehabilitation models.

Pesantren as an Ecological System of Behavioral Change

From the perspective of Bronfenbrenner's Ecological Systems Theory, the pesantren functions as a highly dominant and intensive microsystem that continuously shapes behavior through repetitive, emotionally meaningful, and value-laden interactions (Bronfenbrenner, 1979). Unlike conventional educational or rehabilitation institutions, pesantren blur the boundaries between the microsystem and macrosystem by embedding religious doctrines, cultural norms, moral hierarchies, and collective expectations directly into everyday routines. This ecological density accelerates the internalization of values and the formation of disciplined habits, positioning the pesantren as a developmental accelerator for behavioral transformation.

Furthermore, the alignment between pesantren norms and family expectations strengthens the mesosystem, creating consistency between institutional and familial values. This harmony fosters emotional stability, reduces internal conflict, and enhances moral coherence among rehabilitated students. At the macrosystem level, Islamic ethical principles and pesantren traditions provide symbolic legitimacy that frames abstinence, self-discipline, and moral conduct as socially, culturally, and spiritually desirable behaviors. In this way, behavioral change is reinforced across multiple ecological layers, increasing its durability over time.

Social Learning, Modeling, and Moral Authority

The prominent role of kyai and senior students as behavioral exemplars strongly confirms Bandura's Social Learning Theory, which emphasizes observational learning, modeling, and social reinforcement as fundamental mechanisms of behavior acquisition (Bandura, 1977). Empirical evidence suggests that rehabilitated students primarily learn new patterns of behavior through sustained exposure to disciplined, abstinent, and morally consistent role models rather than through formal instruction alone.

The moral authority of the kyai significantly enhances the effectiveness of this modeling process. Respect, trust, and religious legitimacy increase the likelihood of imitation and internalization of observed behaviors (Fauziah et al., 2025; Widiawati & Firman, 2025; Zamsiswaya et al., 2024). In addition, senior students who have successfully progressed in their recovery serve as "proximal role models," offering concrete evidence that transformation is attainable. This process aligns with Wenger's concept of communities of practice, in which learning occurs through active participation in shared social practices, and identity is gradually reshaped through sustained engagement and social recognition.

Structured Environment and Neurobiological Recovery

Findings regarding the importance of strict routines, environmental control, and limited exposure to high-risk stimuli are highly consistent with the Neurobiological Model of Addiction. Research by Volkow and Koob demonstrates that addiction disrupts the brain's reward circuitry particularly dopaminergic pathways resulting in heightened sensitivity to environmental cues and stressors (Koob & Volkow, 2010; Volkow et al., 2016). The highly structured pesantren environment minimizes exposure to such triggers while promoting predictability, emotional stability, and routine-based self-regulation.

Beyond structural control, the emotional and spiritual climate of pesantren provides psychological buffering that supports neurobiological recovery. Collective worship, spiritual mentoring, and a strong sense of belonging enhance intrinsic motivation and emotional regulation, both of which are critical for restoring impaired reward systems. As a result, pesantren-based rehabilitation operates simultaneously at behavioral, emotional, and neurobiological levels, offering a more integrative recovery framework than approaches focused solely on abstinence or pharmacological treatment.

Transformative Learning through Spiritual Reflection

The cognitive, emotional, and spiritual transformations observed among rehabilitated students provide strong empirical support for Mezirow's Transformative Learning Theory. Religious practices such as *muhasabah* (self-reflection), *dzikir*, and structured religious study sessions function as mechanisms of critical reflection that challenge maladaptive assumptions and reconstruct personal frames of reference (Pepilina et al., 2025; Sholihah et al., 2024). These practices encourage individuals to re-evaluate past behaviors, beliefs, and identities in light of moral and spiritual values (Pambayun et al., 2025).

Spiritual rituals frequently generate disorienting dilemmas, moments in which individuals confront the inadequacy of their previous life orientations and meaning systems. These reflective processes are reinforced through dialogical interactions with kyai and peers, allowing new interpretations to be socially validated and emotionally internalized. Consequently, pesantren function as transformative pedagogical spaces that facilitate deep, enduring change rather than superficial behavioral compliance.

Stages of Change and Maintenance of Recovery

Analysis through the Transtheoretical Model of Change indicates that most rehabilitated students operate primarily within the action and maintenance stages (Prochaska et al., 1992; Prochaska & DiClemente, 1983). Pesantren play a critical role in sustaining the maintenance phase by providing continuous social support, moral supervision, and environmental regulation that reduce the likelihood of relapse.

However, the findings also reveal heightened vulnerability during the transition from pesantren life to broader society, where structured routines and protective social controls diminish. This underscores the importance of continuity of care through alumni networks, community-based mentoring, and post-rehabilitation support systems that can extend the pesantren recovery ecosystem beyond institutional boundaries.

Motivation, Self-Regulation, and Psychological Needs

The findings further align with Self-Determination Theory, which posits that sustainable behavioral change depends on the fulfillment of autonomy, competence, and relatedness (Deci & Ryan, 2000). Pesantren facilitate autonomy by gradually entrusting rehabilitated students with responsibilities and leadership roles, competence through discipline, skill development, and religious mastery, and relatedness through communal living and spiritual brotherhood.

By satisfying these basic psychological needs, pesantren foster intrinsic motivation, enabling rehabilitated students to internalize abstinent behaviors as integral components of their self-concept rather than as externally imposed constraints.

Cognitive Restructuring and Relapse Prevention

Consistent with Cognitive Behavioral Theory, pesantren practices promote cognitive restructuring by challenging maladaptive beliefs and replacing them with value-based, spiritually meaningful interpretations of self and life (McHugh et al., 2010). Religious guidance and reflective practices function as corrective cognitive frameworks that reduce automatic negative thoughts commonly associated with addiction.

Additionally, Relapse Prevention Theory helps explain how pesantren strengthen coping skills through collective supervision, emotional regulation, and disciplined routines (Marlatt & Gordon, 1985). Spiritual practices further enhance stress management, impulse control, and emotional resilience, thereby reducing vulnerability to high-risk situations.

Identity Reconstruction, Meaning, and Recovery Capital

The transformation of identity from "drug user" to "santri" strongly supports Social Identity Theory and the Social Identity Model of Recovery, which identify identity transition as a central mechanism of long-term recovery (Marlatt & Gordon, 1985). This identity shift is reinforced through social recognition, communal roles, and moral legitimacy embedded within pesantren life.

Meaning-Making Theory further explains how pesantren spirituality enables individuals to reinterpret past addiction experiences as meaningful life lessons rather than irreversible personal failures (Park, 2010). This reconstructed life narrative strengthens resilience, motivation, and emotional healing.

Table 1. Research Finding

Theme	Main Findings	Theoretical Lens	Discussion / Interpretation
Pesantren as an Ecological System	Continuous routines, value-based interactions, integration of religious norms in daily life	Ecological Systems Theory (Bronfenbrenner)	Pesantren operates as a dominant microsystem that accelerates behavioral change through ecological density and consistency across social environments
Social Learning and Moral Authority	Kyai and senior students function as behavioral role models	Social Learning Theory (Bandura); Communities of Practice (Wenger)	Behavioral change is achieved through observation, imitation, and moral legitimacy, enabling deep internalization of disciplined and abstinent behaviors
Structured Environment and Recovery	Strict schedules and controlled environments reduce relapse triggers	Neurobiological Model of Addiction (Koob & Volkow)	Environmental predictability supports emotional regulation and neurobiological recovery beyond clinical abstinence models
Transformative Spiritual Learning	Muhasabah and religious practices reshape cognition and emotions	Transformative Learning Theory (Mezirow)	Spiritual reflection facilitates critical reassessment of past behaviors and reconstruction of meaning and identity
Stages of Change and Sustainability	Participants remain in action and maintenance stages	Transtheoretical Model (Prochaska & DiClemente)	Pesantren sustains recovery stages but requires post-institutional support to prevent relapse

Motivation and Self-Regulation	Autonomy, competence, and relatedness are gradually developed	Self-Determination Theory (Deci & Ryan)	Fulfillment of psychological needs fosters intrinsic motivation and long-term self-regulation
Cognitive Restructuring and Relapse Prevention	Maladaptive beliefs replaced by spiritual values	Cognitive Behavioral Theory; Relapse Prevention Theory	Religious guidance and routines function as cognitive correction and coping mechanisms
Identity Reconstruction and Meaning	Shift from "drug user" to "santri" identity	Social Identity Theory; Meaning-Making Theory	Identity transformation and narrative reconstruction strengthen commitment to recovery
Recovery Capital	Social, spiritual, and communal support systems	Recovery Capital Theory (Cloud & Granfield)	Accumulated recovery capital positions pesantren as a sustainable recovery ecosystem

Finally, Recovery Capital Theory elucidates the cumulative impact of personal discipline, social networks, spiritual meaning, and community support embedded within the pesantren ecosystem (Cloud & Granfield, 2008). The synergy among these forms of capital positions pesantren not merely as rehabilitation institutions, but as comprehensive, culturally grounded recovery ecosystems capable of supporting long-term and sustainable addiction recovery.

CONCLUSION

This This study reveals a critical and previously underexplored finding that could only be identified through qualitative field research: rehabilitation at the NAPZA Islamic Boarding School functions as an integrated educational ecosystem that actively constructs hope and sustains recovery through the dynamic interaction of structural discipline, spiritual pedagogy, social learning, and identity reconstruction. Rather than relying on a single therapeutic or clinical intervention, recovery emerges from the immersive and continuous educational environment of the pesantren. This finding challenges conventional assumptions that effective drug rehabilitation must be primarily clinical or medically driven, demonstrating instead that culturally grounded educational ecosystems can play a decisive role in long-term recovery.

This research contributes to the existing literature by confirming previous studies on the importance of social support, structured environments, and spiritual engagement in addiction recovery, while simultaneously extending and refining these findings through an ecosystem-based analytical framework. The study introduces the concept of pesantren-based educational ecosystem for recovery, which integrates insights from ecological systems theory, transformative learning, social identity theory, neurobiological models of addiction, and recovery capital theory. Methodologically, this study enriches qualitative rehabilitation research by demonstrating how religious educational institutions can serve as multidimensional recovery environments, thereby broadening the theoretical and empirical horizons of addiction studies, educational sociology, and Islamic education.

This study is subject to several limitations. The findings are based on a limited number of participants within a single pesantren, which constrains the generalizability of the results. The research context is also specific in terms of institutional culture, geographic location, gender composition, and age range, and thus may not fully represent the diversity of rehabilitation experiences in other settings. Additionally, the qualitative approach, while rich in depth, does not allow for statistical measurement of treatment effectiveness. Future research should involve larger and more diverse samples, include comparative studies across different rehabilitation models, and integrate mixed-methods approaches to generate a more comprehensive understanding of pesantren-based rehabilitation and to inform evidence-based policy development in substance abuse recovery.

REFERENCES

Abas, Z., Tajudin, A., Nugroho, A., & Putra, H. R. (2025). Guardian of Faith: Comparative Insights of Teaching Islamic Theology in Indonesian and Malaysian Pesantren. *Nazhruna: Jurnal Pendidikan Islam*, 8(2), 382–399. https://doi.org/10.31538/nzh.v8i2.235

Abidin, A. A., Fatawi, I., & Kausar, S. (2025). The Values of Islamic Education for Building Tolerance in the Jombang Community: A Qualitative Study of the Role of Religious Harmony Forum. *Tafkir: Interdisciplinary Journal of Islamic Education*, 6(1), 1–16. https://doi.org/10.31538/tijie.v6i1.1182

Arif, M., Aziz, M. K. N. A., & Abdurakhmonovich, Y. A. (2024). Trend Strategy to Prevent Bullying in Islamic Boarding Schools (Pesantren). *Jurnal Ilmiah Peuradeun*, 12(2), 639–670. https://doi.org/10.26811/peuradeun.v12i2.1087

Athoillah, M., Rahman, A. S., Firdaus, A. S., & Septiadi, M. A. (2024). Policies and Practices of Religious Moderation in Pesantren. *Jurnal Pendidikan Islam*, 10(2), 387–396. https://doi.org/10.15575/jpi.v10i2.27543

Aziz, M. B., Fitriani, R, N., Abidin, A. A., Dwiyama, F., & Toha, M. (2024). Cultural Heritage as a Driver of Educational Choices: Evaluating the Role of Bugis Values in the Selection of Islamic Private Schools in Indonesia. *Nazhruna: Jurnal Pendidikan Islam*, 7(3), 726–741. https://doi.org/10.31538/nzh.v7i3.110

Azizah, N., Yusrina, J. A., Nugraini, E. D., & Zulfa, L. N. (2025). "Humanizing Humans" in Inclusive Pesantren: The Role of Peer Support in Promoting Self-Efficacy and Independence. *Jurnal Ilmiah Peuradeun*, 13(2), 987–1020. https://doi.org/10.26811/peuradeun.v13i2.1876

Baihaqi, M. R., Amaliyah, H., Awaliyah, Y. S., Khoerunnisa, S. P., & Laksono, B. A. (2023). Analisis Swot Kebijakan Pemerintah Dalam Upaya Mencegah Kekerasan Seksual Di Lingkungan Pesantren. *Attaqwa: Jurnal Ilmu Pendidikan Islam*, 19(2), 181–191. https://doi.org/10.54069/attaqwa.v19i2.591

Best, D., Beckwith, M., Haslam, C., Alexander Haslam, S., Jetten, J., Mawson, E., & Lubman, D. I. (2016). Overcoming alcohol and other drug addiction as a process of social identity transition: The social identity model of recovery (SIMOR). *Addiction Research & Theory*, 24(2), 111–123. https://doi.org/10.3109/16066359.2015.1075980

BNN Chief Reveals Drug Prevalence in Indonesia Reached 3.3 Million in 2023 | INP | Indonesian National Police. (n.d.). Retrieved 28 December 2025, from https://inp.polri.go.id/artikel/bnn-chief-reveals-drug-prevalence-in-indonesia-reached-33-million-in-2023

Bolton, D., & Gillett, G. (2019). Biopsychosocial Conditions of Health and Disease. In D. Bolton & G. Gillett (Eds), *The Biopsychosocial Model of Health and Disease: New Philosophical and Scientific Developments* (pp. 109–145). Springer International Publishing. https://doi.org/10.1007/978-3-030-11899-0_4

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press.

Cloud, W., & Granfield, R. (2008). *Conceptualizing recovery capital: Expansion of a theoretical construct* (Vol. 43, Issues 12–13).

Erkomaishvili, G. (2024). *Wellness industry and Development trends in Georgia*.

Fauziah, S., Hali, A. U., & Jaya, A. R. (2025). The Influence of Organizational Citizenship Behavior on The Performance of Teachers in Elementary School. *Munaddhomah: Jurnal Manajemen Pendidikan Islam*, 6(1), 29–38. https://doi.org/10.31538/munaddhomah.v6i1.1545

Handayani, R. D., & Utari, D. (2024). Drug abuse prevention strategy in youth and student community in Indonesia. *Journal of Youth and Outdoor Activities*, 1(1), 44–54. https://doi.org/10.61511/jyoa.v1i1.2024.774

Happyana, L., Istiqomah, F. Z., Khasanah, M., & Hussin, M. (2025). Integration of Tradition and Technology: Digitalization Strategies in Islamic Education at Pesantren in Banyuwangi,

Indonesia. *Journal of Islamic Education Research*, *6*(1), 1–18. https://doi.org/10.35719/jier.v6i1.446

Hoch, P. H. (1961). Social Psychiatry. In E. K. Cruickshank, H. Ehrhardt, G. Elsässer, V. E. Frankl, H. Heimann, P. H. Hoch, R. Jung, K. Kolle, H. H. Kornhuber, A. J. Lewis, M. Mead, H. Merguet, J. E. Meyer, M. Müller, M. Pfister-Ammende, G. Rylander, K. Soddy, E. Stengel, W. Villinger, … J. Wyrsch (Eds), *Soziale und angewandte Psychiatrie* (pp. 9–35). Springer. https://doi.org/10.1007/978-3-662-00166-0_2

Iskamar, A'la, A., & Damanhuri. (2025). Religious Nationalism of Kèaè Pesantren: K.H. Zainal Arifin Together with Oreng Kenek Builds Nationality and Curbs Colonialism in Sumenep. *Tafkir: Interdisciplinary Journal of Islamic Education*, *6*(1), 127–152. https://doi.org/10.31538/tijie.v6i1.1705

Karman, K., Yudiantara, R. A., & Muhyiddin, A. (2025). The Qur'an and the Earth: Qur'anic Reception Among Pesantren Residents toward Environmental Conservation. *Ulumuna*, *29*(1), 310–338. https://doi.org/10.20414/ujis.v29i1.1127

Madkan, M., Mumtahana, L., & Ardianto, A. (2025). Implementation of Democratic Values in Islamic Education Learning: Perspectives and Approaches to Improve the Quality of Education. *Adiluhung: Journal of Islamic Values and Civilization*, *1*(1), 1–15. https://doi.org/10.59373/adiluhung.v2i1.107

Marlatt, G. A., & Gordon, J. R. (1985). *Relapse prevention: Maintenance strategies in the treatment of addictive behaviors.* Guilford Press.

McHugh, R. K., Hearon, B. A., & Otto, M. W. (2010). Cognitive-Behavioral Therapy for Substance Use Disorders. *The Psychiatric Clinics of North America*, *33*(3), 511–525. https://doi.org/10.1016/j.psc.2010.04.012

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative Data Analysis.* SAGE.

Muzayana, I. (2024). Systematic Literature Review on the Implementation of the Pesantren Muadalah Certificate Policy in Indonesia. *Kharisma: Jurnal Administrasi Dan Manajemen Pendidikan*, *3*(2), 112–125. https://doi.org/10.59373/kharisma.v3i2.51

Pambayun, S. P., Firmansyah, M. R., Nurkhasanah, M., Indayati, T., & Masfiah, S. (2025). Implementasi Program Unggulan dalam Pembentukan Akhlak Mulia di Madrasah Ibtidaiyah: Perspektif Al-Ghazali. *Adiluhung: Journal of Islamic Values and Civilization*, *1*(1), 16–28. https://doi.org/10.59373/adiluhung.v2i1.113

Patton, M. Q. (2014). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice.* SAGE Publications.

Pepilina, D., Fauzi Fauzi, Safitri, A., S, M. D. A., & Sari, S. N. (2025). Integration of the STEAM Approach Based on Islamic Values in Pesantren Education: An Exploratory Case Study Grounded in Project-Based Learning and the Principles of Ta'dib. *Jurnal Pendidikan Islam*, *14*(1), 119–128. https://doi.org/10.14421/jpi.2025.141.119-128

Porcelli, P., Porcelli, P., Sonino, N., Sonino, N., & Wise, T. N. (2007). *Psychological Factors Affecting Medical Conditions: A New Classification for DSM-V.* Karger Medical and Scientific Publishers.

Prameswari, S. A., & Suryani, I. (2023). The Effectiveness of Group Guidance Based on The Value of Islamic Education in Reducing Academic Procrastination Behavior in Madrasah Aliyah. *Nazhruna: Jurnal Pendidikan Islam*, *6*(2), 226–239. https://doi.org/10.31538/nzh.v6i2.3178

R, A. H. A., & Kamil, H. F. (2025). The Role of Transformational Leadership in Improving the Quality of Human Resources in Islamic Boarding Schools. *Journal of Islamic Education Research*, *6*(2), 210–224. https://doi.org/10.35719/jier.v6i2.480

Ramadhan, A., & Albab, H. A. U. (2025). KH Mas'ud Al-Mudjenar's Spiritual Learning Model in the Pesantren Tradition. *Interdisciplinary Journal of Social Sciences*, *2*(2), 86–93.

Rofiq, M. H., Fahmi, Q., Rokhman, M., & Khamim, N. (2024). Pendidikan Karakter di Madrasah Berbasis Pesantren: Analisis Implementasi dan Evaluasi. *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, *7*(2), 192–203. https://doi.org/10.54069/attadrib.v7i2.837

Rohmah, H., Rena, S., Pahrurraji, P., & Syarif, F. (2023). Implementation of Multicultural Education Values in Senior High School. *At-Tadzkir: Islamic Education Journal*, *2*(2), 78–94. https://doi.org/10.59373/attadzkir.v2i2.29

Sholihah, N., Kusaeri, Kholis, N., Muntafi'ah, U., & Huriyah, L. (2024). Istighātha Dhikr Practices Toward Human Well-Being: An Implication for Islamic Education. *Munaddhomah: Jurnal Manajemen Pendidikan Islam*, *5*(3), 338–352. https://doi.org/10.31538/munaddhomah.v5i3.1402

Sugiono, H., Bisri, A. M., Shonhadji, & Khoiriyati, S. (2024). Madrasah Head's Strategy in Forming Students with Islamic Character through Superior Programs. *Journal of Education and Learning Innovation*, *1*(2), 186–199. https://doi.org/10.59373/jelin.v1i2.56

Tamjidnor, Suriagiri, Surawardi, Samdani, Amal, F., & Khuzaini. (2025). Transformation of Hadith Teaching as an Effort to Revitalize Islamic Science in Pesantren. *Nazhruna: Jurnal Pendidikan Islam*, *8*(1), 123–138. https://doi.org/10.31538/nzh.v8i1.9

Volkow, N. D., Koob, G. F., & McLellan, A. T. (2016). Neurobiologic Advances from the Brain Disease Model of Addiction. *New England Journal of Medicine*, *374*(4), 363–371. https://doi.org/10.1056/NEJMra1511480

White, R. E., & Cooper, K. (2022). Case Study Research. In R. E. White & K. Cooper (Eds), *Qualitative Research in the Post-Modern Era: Critical Approaches and Selected Methodologies* (pp. 233–285). Springer International Publishing. https://doi.org/10.1007/978-3-030-85124-8_7

Widiawati, L., & Firman. (2025). The Effectiveness of Group Counseling Services Using the Cognitive Behavior Modification (CBM) Approach in Preventing Relational Aggression in Students. *Tafkir: Interdisciplinary Journal of Islamic Education*, *6*(2), 292–304. https://doi.org/10.31538/tijie.v6i2.1686

Yamin, M. (2023). Learning Management in Salaf Islamic Boarding Schools. *At-Tadzkir: Islamic Education Journal*, *2*(1), 25–36. https://doi.org/10.59373/attadzkir.v2i1.10

Zamsiswaya, Z., Mounadil, A. I., & Abdel-Latief, S. (2024). Teacher identity, Islamic behavior, and project-based learning methods for madrasah teachers: A phenomenological approach. *Cakrawala Pendidikan*, *43*(2), 344–357. https://doi.org/10.21831/cp.v43i2.51909

Zarkasi, Ma'arif, S., Djamil, A., Ihsan, Mundzir, M. A., Fitriyah, A. W., Waro, M. T. K., & Hanapi, A. (2024). Learning Al-Qur'an Hadith Using Study Tours to Improve Religious Moderation Attitudes and Socio-Cultural Literacy of Madrasah Aliyah Students. *Jurnal Pendidikan Agama Islam*, *21*(2), 461–476. https://doi.org/10.14421/jpai.v21i2.8744