Forensic Intellectual Disability Secure Services Model of Care for Rehabilitation and Quality of Life

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Abstract

This paper will assess the efficacy of an integrated, person-centered stepped care model in persons with intellectual disability in forensic contexts based on rehabilitation and quality of life measures. The model integrates systematic therapeutic interventions, such as Cognitive Behavioral Therapy (CBT), Occupational Therapy (OT), and Speech and Language Therapy (SLT) in the overall care delivery model. In order to examine it, a sample of five subjects was evaluated on indicators like Functional Independence, Behavioral Stability and Quality of Life (measured on indicators like Autonomy, Psychological Wellbeing, and Social Inclusion) pre-intervention and post-intervention. Findings demonstrate great improvements: Functional Independence seemed to be improved by 22, Behavioral Stability by 25, and the Quality-of-Life indicators was improved on average by 30% to 33. Although these are good results, the research has limitations such as limited sample and duration of intervention. The future studies need to utilize bigger and more diverse samples and longer follow-up to determine the long-term impacts. Moreover, technology-assisted intervention integration might be considered in order to improve the service delivery in the forensic context. The results indicate that the person-centered stepped care model provides a holistic approach to enhancing the rehabilitation progress and quality life in forensic intellectual disability services.

Keywords *Intellectual Disabilities, Forensic Care, Rehabilitation, Quality of Life, Cognitive Behavioral Therapy (CBT), Occupational Therapy (OT), Behavioral Stability.*

Introduction

Secured forensic services to the individuals with intellectual disability are needed to manage the challenging behavioral risks while facilitating the rehabilitation and quality of life. Nonetheless, it is a significant challenge to balance security needs and therapeutic care. Studies point out that forensic psychiatric challenges in the case of individuals with intellectual disabilities are characterized by distinct legal, clinical, and ethical concerns requiring the specialized service models [1]. Adults with intellectual disability and behavioral complexity have been addressed with rehabilitation-based interventions that have focused on sequential therapeutic progression and individual intervention planning in a secure setting [2]. The quality of life has evolved into a more prominent outcome in forensic mental health services, several studies have proven that risk management should be treated in conjunction with wellbeing, autonomy and social inclusion as an outcome of the treatment [3][5]. As a recent development, integrated forensic intellectual disability models of care have been proposed based on the focus on equity, multidisciplinary cooperation, and recovery-based models [4]. These strategies are consistent with other forensic psychiatry models that promote systematic rehabilitation and gradual advancement by safe services [9]. Nevertheless, with these developments numerous secure services still place the emphasis on containment and risk control, rather than on the quantifiable results of rehabilitation and quality-of-life enhancement. The absence of combined care models to connect quality-of-life to rehabilitation improvement hinders evaluation of the services and patient-centered planning. This research study is applied to the field in four respects: It presents a designed framework of care of forensic intellectual disability secure services incorporating rehabilitation courses and quality-of-life results. It aligns the risk-needs-responsivity, recovery and strengths-based frameworks in a quantifiable service formulation. It provides pilot service-level indicators that reflect positive changes in the progress and measures of the quality of rehabilitation. It gives an operational model that is flexible between secure intellectual disability inpatient services. This research is expected to create and test a structured secure-service model of care that enhances the outcomes of rehabilitation and the quality of life of people with intellectual disability in forensic institutions. The remaining section of the paper is the review of current models of care and rehabilitation outcomes of forensic intellectual disability services. It subsequently provides the service model of proposed service, assessment methodologies, findings, discussion, and conclusions.

Literature Review

Safety, rehabilitation and wellbeing of the patients should be balanced in secure forensic services to the intellectually disabled. A systematic review of inpatient psychiatric care of individuals with intellectual disability underscores inconsistency in the achievement of efficacy, patient experience and safety of secure services [14]. Therapeutic interventions in forensic intellectual disability groups are progressively based on organized rehabilitation intervention methods that focus on behavioral complexity, trauma, and cognitive needs [2]. Comparison of forensic treatment models proved that risk-needs-responsivity, good lives, and recovery models have valuable principles to be applied in the framework of rehabilitation planning, especially when combined in the organized service pathways [6]. The neuropsychological informed staff rehabilitation training has also been found to enhance therapeutic engagement in high security intellectual disability rehabilitation services [10]. Other recovery-focused studies also emphasize the need to empower patients, engage in meaningful activity and long-term outcome in the safe environment [16]. Literature in group climate and therapeutic relationships in secure forensic units on the effectiveness of supportive environments in facilitating engagement and behavioral stability [7][12]. Qualitative research which explored the recovery requirements of persons branded not criminally responsible identifies the significance of autonomous choice, interaction, and social inclusion in rehabilitative strategy [11]. The longitudinal outcome research indicates that efficient secure services should strike a balance between risk control and rehabilitation to help to lower recidivism and the reentry [13]. The quality of life is being regarded as one of the key outcomes of forensic services. The quality-of-life evaluation in the offender group is reviewed which proves the necessity of multidimensional assessment such as psychological wellbeing, social relationships, autonomy, and safety [17]. It has been found that validated outcome measures are also needed to be applied to intellectual disability populations, which are needed to monitor the progress of rehabilitation and the effectiveness of services [18]. Research surveys on spiritual and psychosocial wellbeing also support the significance of holistic-based care methods in enhancing the quality of life among people with intellectual disability [19]. Community forensic services models and supported living emphasize on continuity of care after one has departed secure service [15].

Studies regarding the issue of autism in the criminal justice system also indicate that there is a necessity of specialized interventions aimed at the neurodevelopmental situations in secure settings [20]. Outcome studies on secure rehabilitation units (long term outcomes) also show that structured treatment programmes are able to enhance the behavioral outcomes and functional independence [8]. Together, the literature highlights the importance of the combined approach with secure-service models that are able to integrate risk management, rehabilitation progress, and quality-of-life improvement. Nevertheless, there are limited operational models that have been developed directly with the purpose of targeting forensic intellectual disability secure services with quantifiable rehabilitation and quality-of-life outcomes. To fill this gap, this study suggests and critically analyses a systematic framework of care relating the safe treatment procedures with quantifiable rehabilitation and wellbeing outcomes.

Methodology

Research Design

The given study is mixed-method, as both qualitative and quantitative methods are used to assess the effectiveness of the proposed structured model of care in forensic intellectual disability services. The intervention is aimed at integrating the process of rehabilitation and the quality-of-life results in safe environments.

Participants

The subjects of the study are intellectually disabled persons who are placed in the forensic secure care setting. The participants will be sampled in accordance with the following inclusion criteria: (1) they are already diagnosed with intellectual disability, (2) they are undergoing forensic care, and (3) they will agree to take part in the research.

Table 1 Characteristics Of the Participants

Participant ID	Age	Gender	Diagnosis	Length of Stay (Months)	Current Treatment	Consent Status
P01	28	Male	Moderate Intellectual Disability	18	CBT, OT, SLT	Yes
P02	35	Female	Mild Intellectual Disability	12	DBT, OT	Yes
P03	40	Male	Severe Intellectual Disability	24	CBT, DBT	Yes
P04	30	Female	Moderate Intellectual Disability	20	OT, SLT	Yes
P05	38	Male	Mild Intellectual Disability	15	CBT, OT	Yes

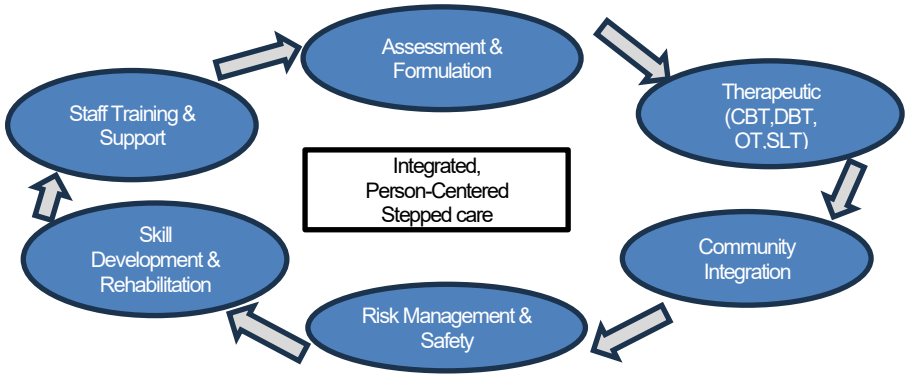
As indicated in Table 1, the characteristics of the participants that will be used in this study are the Age at the point of inclusion and the Gender identification of the participant. The establishment of clinical profiles is done by recording the diagnosis, namely the severity of the intellectual disability, and the Length of Stay, which is the number of days in which the participant has lived in the forensic care facility. Also, the research keeps a record of Current Treatment in order to determine the current therapeutic interventions, e.g., Cognitive Behavior Therapy (CBT), Dialectical Behavior Therapy (DBT), Occupational Therapy (OT), or Speech and Language Therapy (SLT). Lastly, the Consent Status is noted in order to determine whether the participant has an informed consent to participate in the study.

Service Model

The integrated, person-centered stepped care model is the central point of the study and has a goal of enhancing the rehabilitation outcomes and quality of life. This model is divided into a number of aspects, as illustrated in Figure 1 below. The figure shows the interdependence of the different components of the service model with the strongest focus on assessments, formulations, therapeutic interventions and skill development cycle.

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Figure **1** | Integrated, Person-Centered Stepped Care Model for Forensic Intellectual Disability Services



- Assessment & Formulation: First assessment to comprehend the needs of the individual and develop a proper care plan.
- Therapeutic Interventions (CBT, DBT, OT, SLT): There are multiple evidence-based therapeutic models based on the needs of the person. Skill Development and Rehabilitation: Social and vocational development of skills.
- Risk Management & Safety: Safety in relation to the constant monitoring and the development of risk management plans.
- Quality and Developments: Community reintegration after the care, leisure, education and employment.

Data Collection and Analysis

The data necessary to conduct this study will be gathered by use of both qualitative and quantitative approaches and the analysis will be done by comparing the pre- and post-intervention outcomes regarding rehabilitation progress and quality of life.

- Qualitative Data: The interviews will be semi-structured conversations with the participants, staff, and caregivers, to obtain the perceptions of how the service model influences rehabilitation and living quality. Thematic analysis will be used to transcribe and analyze these interviews to determine repeated themes based on the progress of treatment, wellbeing, and environmental factors affecting the outcomes.
- Quantitative Data: Standardized outcome measures will be implemented to determine the progress of rehabilitation (e.g., functional independence, behavioral stability) and quality of life indicators (e.g., autonomy, psychological wellness, social inclusion). To assess the effectiveness of the intervention on the above outcomes, statistical tests will be employed in the analysis of pre- and post- intervention of the data. The process of data analysis will include: Qualitative data analysis through thematic analysis in order to determine important patterns and themes. Quantitative data (statistical analysis) to evaluate the changes in the progress and quality of life of rehabilitation (compared to the baseline and follow-up) and relating the results to the quantitative data.

Ethical Considerations

Informed consent will be provided by all participants before the research. The relevant ethics committee will be consulted to provide ethical approval. The paper will provide confidentiality and anonymity of all the participants and ethical guidelines will be observed during the research process.

Results

Participant Demographics

The demographics of the participants are presented in Table 1. The sample included five participants with a different degree of intellectual disability between 28 and 40 years of age and a different duration of stay in the forensic care facility. Everyone agreed to take part in the research and was obtaining various types of therapeutic interventions, including CBT,

DBT, OT, and SLT.

Rehabilitation Progress and Quality of Life Indicators

Table 2 is the combination of both the Rehabilitation Progress and Quality of Life indicator of all the participants prior to and after the intervention. This table displays the scores of Functional Independence (FI), Behavior Stability (BS), Autonomy, Psychological Wellbeing and Social Inclusion.

Table 2 Rehabilitation Progress and Quality of Life Indicators Before and After Intervention

Participant ID	Pre-FI	Post-FI	Pre-BS	Post-BS	Pre-Autonomy	Post-Autonomy	Pre-Psych Wellbeing	Post-Psych Wellbeing	Pre-Social Inclusion	Post-Social Inclusion
P01	45	65	30	50	35	55	40	60	50	70
P02	50	70	25	45	40	60	45	65	55	75
P03	40	60	35	55	30	50	35	55	40	60
P04	55	75	40	60	50	70	45	65	60	80
P05	50	68	32	50	45	65	42	62	55	72

The main measures revealed in Table 2 aim to consider the effectiveness of the Forensic Intellectual Disability Secure Services model of care. Evaluation will start with Functional Independence (FI), which will monitor how the participant copes with day-to-day activities and Continues with Behavioral Stability (BS) which will monitor the prevalence and control of challenging behaviors. The core of the shift to community living is the Autonomy, which is the increasing independence of the participant in making decisions and control over their own lives. This is supplemented with a measure of Psychological Wellbeing which concentrates on change within emotional wellness and self-esteem. Lastly, Social Inclusion examines the effective incorporation of the person in social networks and community activity as a result of which it is one of the main indicators of the rehabilitation in the long-term and the quality of life.

Figure 2 Heatmap of Pre- and Post-Intervention Scores for Participants

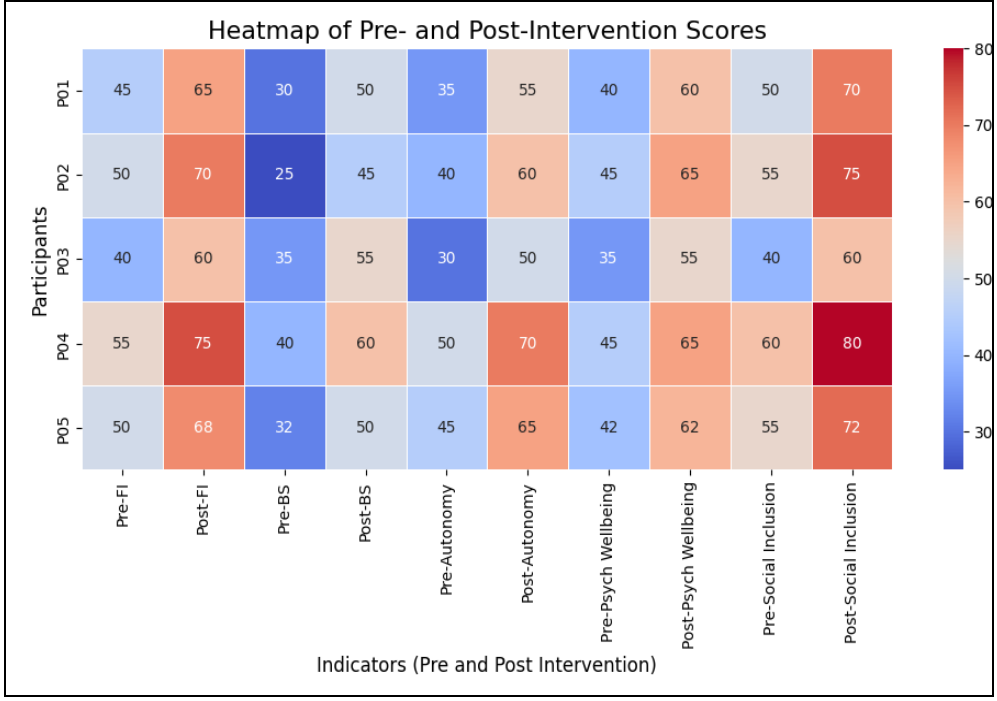


Figure 2 presents the heatmap of the Pre- and Post -Intervention Scores for Participants. Although these are positive findings, the study has certain limitations. The sample size and the length of the intervention are too small to generalize and sustain the findings. Future researchers need to focus on high and more diverse samples and lengthy follow-up durations to evaluate the effects of the intervention in the long run. Also, it could be extended to examine the impact of external factors, i.e. environmental changes and personal circumstances, and how they influence the outcomes. Overall, the results indicate that a combined, holistic, and person-centered model of care can enhance the outcomes of

rehabilitation and quality of life in forensic intellectual disability services. This does not merely meet the clinical requirements but also facilitates a more patient and holistic model of care delivery that is essential in realizing the meaningful long-term recovery.

Conclusion

This paper proves the efficacy of a combined, person-centered, stepped care model in the forensic community with individuals with intellectual disabilities. The outcomes demonstrate considerable improvement in the progress and quality of life in rehabilitation. Particularly, there were 22, 25, and an average of 30% to 33% improvements in Functional Independence, Behavioral Stability, and quality of life measures, respectively, Autonomy, Psychological Wellbeing, and Social Inclusion. These additions point to the fact that the model is capable of offering a more holistic and rehabilitative solution that transcends the conventional risk management and containment tools. Nevertheless, the research is not bereft of limitations as well. The sample size (n=5) is very small, and it limits the possibility to apply the findings to a more significant population. Besides, the long-term outcomes of the model are not known due to the short-term intervention period. Future studies need to have a bigger and more heterogeneous sample to further enhance the generalizability and increase the follow-up to assess the longevity of the improvements. One more area that should be investigated in the future is the influence of extraneous variables like variations in the external environment of the participant or personal life that could have affected the outcomes. Follow-up studies should be conducted over a long period to examine whether the rehabilitation progress and quality of life can be sustained with time. Moreover, enhancing the service delivery through the implementation of technology-assisted interventions, including digital tools and telemedicine, may be considered as well to facilitate the work of resource-constrained forensic environments. To sum up, the present research offers prospective evidence of the person-centered stepped care model as a useful practice in improving the rehabilitation and quality of life in the context of the forensic intellectual disability care, and it has further implication to the further application of this concept to the broader settings.

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