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Leveraging Neuro-Linguistic Programming to Enhance Juvenile Self-Esteem: An Expert Evaluation of Strategic Communication Techniques

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ABSTRACT

Although conventional juvenile rehabilitation frameworks often prioritise behavioural compliance, they may give limited attention to the role of strategic communication in shaping offenders' self-perceptions. This study evaluates Neuro-Linguistic Programming (NLP) as a communication-oriented framework that may support self-esteem development among institutionalised youth. Using an expert-driven qualitative design, five certified NLP practitioners evaluated 50 NLP modalities through card-sorting exercises and semi-structured interviews. These techniques were mapped against four self-esteem domains: self-mastery, self-efficacy, self-liking, and competence. Expert consensus identified seven techniques as potentially relevant for youth rehabilitation contexts: Rapport, Mind to Muscle, Reframing, Visual Squash, Circle of Excellence, Developing Self-Appreciation, and the Swish Pattern. As the study is limited to expert-level validation and does not include field testing with juvenile populations, the findings should be viewed as preliminary and directional. The study contributes to applied communication, forensic psychology, and correctional rehabilitation by offering an expert-informed basis for the future development and empirical testing of communication-based rehabilitation modules.

Keywords: Neuro-Linguistic Programming, juvenile rehabilitation, self-esteem, strategic communication, expert validation

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1.0 Introduction

Juvenile offenders frequently experience multifaceted psychological and emotional challenges, with low self-esteem representing a significant obstacle to rehabilitation and reintegration into society. Diminished self-esteem is closely linked to poor emotional regulation, impaired interpersonal skills, and a pervasive lack of life purpose, factors that Hodgkinson et al. (2021) argue can significantly impede successful reintegration. These developmental difficulties are seldom spontaneous in nature. As Dardas et al. (2025) observe, they are often rooted in early adverse experiences, including chronic neglect, systemic family dysfunction, academic failure, and direct exposure to interpersonal violence or trauma.

Conventional correctional frameworks remain largely reactive, prioritising behavioural compliance and institutional discipline over the cognitive and emotional undercurrents that drive delinquent behaviour. Traditional programmes also tend to overlook the role of communication in shaping self-perception and mediating behavioural change (UNODC, 2021). Neuro-Linguistic Programming (NLP) has been presented as a communication- and change-oriented approach that uses language, imagery, and behavioural exercises to influence individuals' subjective experiences and responses (Passmore & Rowson, 2019). Techniques commonly associated with NLP include anchoring, reframing, visualisation, and future pacing. Some empirical studies have reported possible improvements in psychological or educational outcomes following NLP-based interventions (Zhang et al., 2023). These techniques may therefore provide structured activities through which adolescents can examine negative self-perceptions, practise alternative interpretations, and rehearse desired responses. However, NLP should not be presented as an established therapeutic framework because systematic and critical reviews have found that its distinctive theoretical claims and effectiveness remain inadequately supported by rigorous evidence (Passmore & Rowson, 2019; Sturt et al., 2012; Witkowski, 2010). Its possible application to juvenile rehabilitation should consequently be treated as preliminary and subjected to carefully designed empirical testing.

Using a qualitative design that combines in-depth interviews and card-sorting exercises with certified experts, this study aims to identify and evaluate an evidence-informed rehabilitation module grounded in strategic communication. Its main objective is to contribute to a rehabilitative approach oriented towards psychological transformation by supporting juvenile offenders in restructuring their self-image, belief systems, and emotional responses through structured and replicable communication strategies.

2.0 Literature Review

Self-esteem is an important aspect of adolescent development and is associated with psychological well-being, interpersonal relationships, and behavioural adjustment (Orth & Robins, 2014). Longitudinal research indicates that adolescents with consistently low or declining self-esteem may demonstrate greater susceptibility to peer pressure, poorer academic outcomes, increased alcohol misuse, and greater tolerance of deviant behaviour (Zimmerman et al., 1997). Low adolescent self-esteem has also been associated with adverse adult outcomes, including poorer physical and mental health, criminal convictions, and limited economic prospects (Trzesniewski et al., 2006). Among justice-involved adolescents, self-esteem has been examined in relation to childhood trauma, shame, and behavioural outcomes, indicating its potential relevance to psychological assessment and rehabilitation (Chen et al., 2024).

Self-esteem should not, however, be viewed as an independent cause of offending or a single solution to recidivism. It represents one of several individual, relational, and social factors that may shape young people's engagement with rehabilitation. Programmes addressing self-perception, emotional regulation, communication, and social competence may therefore support personal development, but their effects must be established empirically.

Originally developed by Bandler and Grinder (1975), neuro-linguistic programming (NLP) comprises a collection of communication and change-oriented techniques concerned with relationships among language, subjective experience, and behaviour. Techniques commonly associated with NLP include anchoring, reframing, rapport-building, visualisation, and future pacing (Passmore & Rowson, 2019).

Proponents suggest that these techniques can help individuals examine established interpretations, rehearse alternative responses, and modify patterns of communication and behaviour. These proposed functions may appear relevant to rehabilitation because they concern self-perception, emotional responses, and interpersonal communication.

Nevertheless, NLP remains contested within psychological and therapeutic research. Although individual studies have reported positive outcomes in educational and selected clinical contexts (Doğan et al., 2022; Zhang et al., 2023), systematic and critical reviews have concluded that the overall evidence is limited by methodological weaknesses, small samples, inconsistent findings, and insufficient independent replication (Passmore & Rowson, 2019; Sturt et al., 2012; Witkowski, 2010). NLP therefore cannot presently be characterised as an established evidence-based rehabilitation intervention. Moreover, its effectiveness among juvenile offender populations has not been adequately investigated. Research specifically examining the application of individual NLP techniques in juvenile justice settings appears particularly limited, including in Southeast Asia. The present study consequently treats NLP as a communication-oriented framework requiring preliminary expert assessment before any intervention is developed or tested with young people. Its purpose is to identify, through expert judgement, which NLP techniques are perceived as relevant to the self-esteem-related needs of juvenile offenders. Expert endorsement indicates perceived relevance and content validity; it does not demonstrate clinical effectiveness or behavioural change.

The findings are intended to provide a preliminary basis for developing a structured communication-based rehabilitation module. Any resulting module would require ethical review, feasibility assessment, and rigorous field-based evaluation before conclusions could be drawn about its effectiveness in supporting rehabilitation or reducing reoffending. Table 1 provides a descriptive synthesis of the studies reviewed.

Table 1

Descriptive Synthesis of Reviewed Studies

No	Author/ Year	Study Context	Purpose	Method	Technique
1	Trzesnie wski et al. (2006)	Adolescents and young adults	To examine the long-term impacts of low self-esteem during adolescence on adult outcomes.	Longitudinal cohort study	Self-perception tracking, Cognitive behavioral mapping
2	UNODC (2021)	Juvenile rehabilitation center	To empower juvenile offenders through life skills-based training to build self-esteem.	Evaluative intervention report	Rapport building
3	Ghanem et al. (2024)	Primary schoolchildren	To assess the effectiveness of an NLP-based program on mitigating negative school triggers.	Quasi- experimental (Pre-test/Post- test design)	Anchoring, Reframing, Visual Squash, Swish Pattern
4	Maric and Kok (2023)	Juvenile justice and correctional facilities	To analyse individualized treatment planning and psychological factors in juvenile rehabilitation.	Systematic literature review and case analysis	Sensory acuity calibration
5	Fletcher et al. (2023)	Institutional youth correction	To transition from simple behavior management to deeper psychological transformation using structured modules.	Mixed- methods evaluation	Circle of Excellence

3.0 Method

This study employed a qualitative, expert-driven methodology structured in the following sequential phases.

3.1 Phase 1: Systematic Literature Review (SLR)

A systematic literature review was conducted to identify the range of NLP techniques reported in the literature. Broad NLP-related terms— “Neuro-Linguistic Programming,” “NLP techniques,” “NLP therapy,” “NLP treatment,” and “NLP interventions”—were selected because relevant studies use inconsistent terminology to describe NLP-based practices. The search was intentionally not restricted by self-esteem-related terms to avoid excluding techniques that had not previously been studied specifically in relation to self-esteem but might subsequently be judged relevant by the expert panel. Searches conducted in Google Scholar, Scopus, and Web of Science retrieved 314 records (see Table 2). The relevance of the identified techniques to the four self-esteem domains was assessed during the expert-validation phase rather than assumed from the literature search.

Table 2

Search String Used

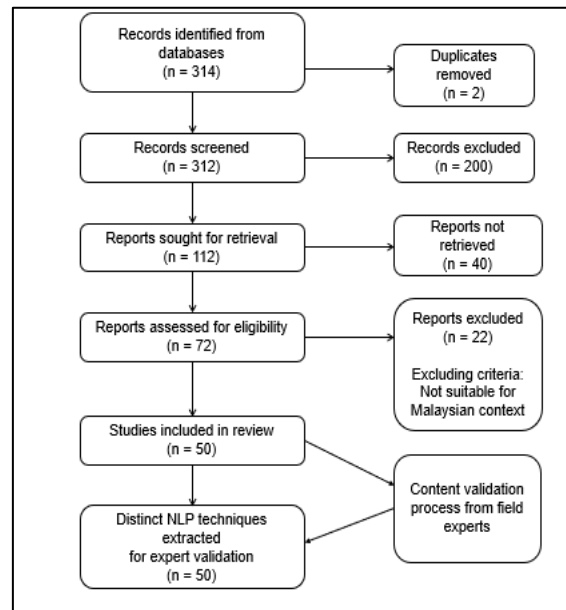
Search Query	Search Area
TITLE-ABS-KEY ("Neuro-Linguistic programming") AND ("NLP Techniques") AND ("NLP therapy") AND ("NLP treatment") AND ("NLP interventions"))	Title, abstract and keywords

Following the PRISMA 2020 protocol (Page et al., 2021), the selection process proceeded in three stages, as illustrated in Figure 1. Of the 314 records initially identified, two duplicate records were removed, leaving 312 records for title and abstract screening. Of these, 200 records were excluded because the NLP applications described were not contextually applicable to juvenile rehabilitation. Of the 112 reports sought for retrieval, 40 could not be retrieved, leaving 72 reports to be assessed for eligibility. Following the exclusion of 22 contextually unsuitable studies, 50 studies were retained. From these studies, 50 distinct NLP techniques were extracted for subsequent content validation by field experts.

Studies were included if they discussed NLP techniques relevant to psychological intervention, self-esteem development, youth rehabilitation, counselling, coaching, or behavioural change. Studies were excluded if they focused on NLP applications unrelated to psychological development, juvenile rehabilitation, or communication-based intervention.

Figure 1

PRISMA 2020 Flow Diagram for Study Selection



3.2 Phase 2: Expert Selection and Recruitment

Five certified NLP practitioners were purposively selected based on the following criteria: (a) possession of a recognised NLP certification from an accredited professional body, including, but not limited to, the International Society of Neuro-Semantics (ISNS), the Global Association of Applied NLP Studies (GAANS), or the National Federation of Neuro-Linguistic Programming (NFNLP); (b) a minimum of five years of active professional experience in therapy, counselling, coaching, or a closely related discipline; and (c) demonstrated specialisation in at least one area relevant to psychological intervention or youth development, such as hypnotherapy, cognitive-behavioural coaching, educational psychology, neuro-semantic, or handwriting analysis. The diversity of expert backgrounds was intentional, as it ensured that the NLP techniques were assessed from multiple disciplinary perspectives, thereby strengthening the breadth and credibility of the evaluation.

Experts were initially identified through established NLP practitioner networks and professional directories. Each potential participant received a formal written invitation outlining the purpose, procedures, and ethical considerations of the study. Informed consent was obtained from all five participants before data collection. No financial incentives were provided for participation.

As part of the quality assurance process, a rigorous review protocol was applied to ensure the validity and relevance of the selected NLP techniques. After a careful and systematic selection process, 50 NLP techniques were compiled based on the criteria outlined in the PRISMA review protocol. These techniques represent evidence-based practices identified through a comprehensive review of the literature. The Content Validation Index (CVI) presented below explains the NLP techniques, indicates the total number of scholars who wrote about each technique, and summarises the selection process that contributed to ensuring the quality and credibility of the content used in this study.

3.3 Phase 3: Card Sorting Procedure

Card sorting was used as the primary instrument for Phase 3 data collection. Each of the 50 NLP techniques identified in the SLR was assigned to an individual card labelled with the technique's name and a concise, standardised description to ensure uniform understanding across all experts. Conducted individually under the researcher's guidance, the sorting exercise required experts to classify the 50 technique cards into four predefined self-esteem domains: self-mastery, self-efficacy, self-liking, and competence. These classifications were based on experts' professional judgement regarding each technique's perceived relevance to the respective domain.

The procedure was structured as a closed card sort, in which the categories were predetermined and theoretically grounded in established self-esteem frameworks. However, experts were permitted to assign a technique to more than one domain if they judged it to be relevant across multiple dimensions. Upon completion of each session, the researcher recorded the sorting decisions made by the participants. Each expert's endorsement of a technique within a given domain is denoted using a checkmark notation ($\checkmark$ = endorsed; blank = not endorsed), as reflected in Tables 3, 4, and 5.

3.4 Phase 4: Content Validity Index (CVI) Calculation

The initial literature frequency presented in Appendix A was distinguished from the expert validation metrics presented in Tables 3- 5 to maintain analytical rigor. While the literature review established the 50 candidate techniques, the final selection relied strictly on the I-CVI expert consensus threshold (≥ 0.80). To quantify the level of expert agreement on each technique's relevance, the Item-level Content Validity Index (I-CVI) was calculated. Each expert's endorsement decision was treated as a binary rating: endorsed (1) or not endorsed (0). The I-CVI for each technique within each self-esteem domain was computed as follows: $I-CVI = \text{number of experts endorsing the item} \div \text{total number of experts (N = 5)}$.

A threshold of $I-CVI \geq 0.80$ was applied as the retention criterion, consistent with the established content validation guidelines (Polit & Beck, 2006). Techniques endorsed by all five experts yielded an I-CVI of 1.00, indicating a strong consensus, while those endorsed by four out of five experts yielded an I-CVI of 0.80, meeting the minimum threshold for inclusion. Techniques that scored below this threshold were excluded from the final set of recommended techniques. Accordingly, the total scores presented in Tables 3, 4, and 5 correspond to the I-CVI values as follows: a score of 5 = I-CVI of 1.00, and a score of 4 = I-CVI of 0.80.

3.5 Phase 5: Semi-Structured Expert Interview

Following the card sorting activity, individual semi-structured interviews were conducted with each of the five experts to elicit qualitative insights into the practical dimensions of applying NLP in juvenile rehabilitation settings. With each participant's informed consent, all the interviews were audio-recorded and subsequently transcribed verbatim.

The interview protocol was guided by four thematic areas: (a) optimal session frequency for juvenile populations, (b) adaptability of NLP techniques in response to individual differences in cognitive maturity, emotional readiness, and cultural background, (c) appropriate session duration and structure, and (d) strategies for evaluating intervention outcomes. Where necessary, follow-up probing questions were used to encourage elaboration and to clarify expert reasoning. The interview guide was reviewed by the research team prior to use to ensure its relevance and appropriateness for the study context.

3.6 Phase 6: Data Analysis and Integration of Findings

Interview transcripts were analysed using thematic analysis following the six-phase framework proposed by Braun and Clarke (2006): (1) familiarisation with the data, (2) generation of initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. The primary researcher conducted the initial coding, and a sample of transcripts was independently reviewed by a second member of the research team to enhance analytical rigor. Emerging themes were discussed iteratively until a consensus was reached across the team.

To integrate the findings from both card sorting and interviews, a triangulation approach was applied. Specifically, the quantitative card sorting results, represented by I-CVI scores and patterns of expert endorsement, were cross-referenced with the qualitative themes derived from the interview transcripts. Techniques that achieved high expert agreement in the card-sorting phase were further examined through interview data to understand the expert rationale underlying these endorsements. This integration allowed the study to present both a ranked set of expert-endorsed techniques and a contextualised, interpretive account of how and under what conditions each technique may be applied in juvenile rehabilitation settings.

4.0 Results

4.1 Distinguishing Literature Frequency from Expert Validation

This study drew on two distinct sources of data, which were reported separately to avoid conflation. The first comprises the literature frequency data presented in Appendix A, which records how many times each of the 50 candidate NLP techniques appeared across the studies retained through the systematic literature review (see Section 3.0, Phase 1). These data served only to inform the initial compilation of the technique pool submitted for expert review; they did not reflect any judgement of relevance to juvenile rehabilitation and were not used in the retention decision reported below.

The second source comprised expert validation data presented in Tables 3–5, which were generated through the card-sorting exercise and used to calculate the Item-level Content Validity Index (I-CVI) for each technique. The I-CVI for a given technique within a given self-esteem domain was calculated as the number of experts who endorsed that technique divided by the total number of experts ($N = 5$). Following Polit and Beck (2006), a retention threshold of $I-CVI \geq 0.80$ was applied: a technique endorsed by all five experts yielded an I-CVI of 1.00, while a technique endorsed by four of the five experts yielded an I-CVI of 0.80, the minimum value meeting the threshold for retention. Techniques that fell below this threshold were not retained. Accordingly, expert validation data, rather than literature frequency counts, form the basis of the findings reported in this section.

4.2 Expert-Endorsed Techniques by Self-Esteem Domain

Of the 50 techniques submitted for card sorting, seven met or exceeded the I-CVI retention threshold across the four self-esteem domains examined: self-mastery, self-efficacy, self-liking, and competence.

- a. Self-mastery. Mind to Muscle, Rapport, and Reframing each achieved an I-CVI of 1.00 (Table 3). Experts associated these three techniques with helping juveniles strengthen conscious control over their thought patterns, emotional responses, and behavioural impulses, which they viewed as a prerequisite for more goal-directed action.

Table 3

NLP Techniques Based on Self-Mastery

Component of Self Esteem	Techniques of NLP	Expert					Total Score	I-Cvi
		E1	E2	E3	E4	E5		
Self-Mastery	Mind to Muscle	√	√	√	√	√	5	1.00
	Rapport	√	√	√	√	√	5	1.00
	Reframing	√	√	√	√	√	5	1.00

- b. Self-efficacy. Rapport, Visual Squash, and Circle of Excellence each achieved an I-CVI of 1.00 (Table 4). Experts indicated that these techniques were perceived as relevant to strengthening juveniles' belief in their own capacity to succeed and manage obstacles during the rehabilitation process. However, this perception has not been empirically tested.

Table 4

NLP Techniques Based on Self-Efficacy

Component of Self Esteem	Techniques of NLP	Expert					Total Score	I-Cvi
		E1	E2	E3	E4	E5		
Self-Efficacy	Rapport	√	√	√	√	√	5	1.00
	Visual Squash	√	√	√	√	√	5	1.00
	Circle Of Excellence	√	√	√	√	√	5	1.00

- c. Self-liking and competence. Rapport again achieved an I-CVI of 1.00, while Developing Self-Appreciation and the Swish Pattern each achieved an I-CVI of 0.80 (Table 5). Experts described these two techniques as potentially useful for helping juveniles build a more positive self-image and a stronger sense of internal worth, particularly among those contending with shame, guilt, or trauma.

Table 5

NLP Techniques Based on Self-Liking and Competence

Component of Self Esteem	Techniques of NLP	Expert					Total Score	I-Cvi
		E1	E2	E3	E4	E5		
Self-Liking	Developing self-appreciation	√		√	√	√	4	0.80
	Rapport	√	√	√	√	√	5	1.00
	Swish Pattern	√		√	√	√	4	0.80

Note. I-CVI = Number of experts endorsing the technique ÷ total number of experts (N = 5). A score of 5 corresponds to an I-CVI of 1.00; a score of 4 corresponds to an I-CVI of 0.80, the minimum retention threshold (Polit & Beck, 2006).

The I-CVI results indicate a strong expert consensus on a core set of seven NLP techniques perceived as potentially relevant to juvenile rehabilitation: Mind to Muscle, Rapport, Reframing, Visual Squash, Circle of Excellence, Developing Self-Appreciation, and Swish Pattern. Notably, Rapport was the only technique to achieve an I-CVI of 1.00 across all three domains, suggesting that experts viewed it as a foundational technique with cross-domain relevance rather than one confined to a single dimension of self-esteem. This point is addressed only once here to avoid repetition, although it recurs as a theme in the interview data reported below. The remaining six techniques were each retained within a single domain, collectively spanning cognitive restructuring, emotional regulation, and motivational enhancement, processes experts considered conceptually relevant to fostering behavioural change among juvenile offenders, although this relevance has not yet been empirically verified with this population.

4.3 Thematic Analysis of Expert Interviews

The in-depth interviews conducted with five certified NLP experts yielded rich qualitative data that strengthened our understanding of how NLP techniques can be optimally applied within juvenile rehabilitation settings. The thematic analysis yielded four core themes: session frequency, technique adaptability, optimal duration, and metrics for effectiveness evaluation. These themes capture the practical nuances required to tailor therapeutic communication to the unique emotional and developmental needs of adolescent offenders.

4.3.1 Session Frequency

The experts strongly emphasised that, because juvenile offenders possess highly diverse psychological profiles, determining session frequency requires a strictly client-centred approach that accounts for individual responsiveness and readiness. While certain individuals might experience a significant breakthrough during an intensive initial session, the experts agreed that a single encounter was rarely sufficient for long-term behavioural change. Instead, a structured series of shorter spaced-out sessions is vital to allow juveniles to gradually internalise and practise the NLP techniques. As Expert 3 observed:

“For many young offenders, trauma and unhealthy self-esteem are deeply entrenched; a one-off session might plant the seed, but follow-ups are essential to nurture growth and prevent relapse into negative patterns.” (Expert 3)

This statement aligns with the principles of neuroplasticity highlighted by Kleim and Jones (2008) who state that repeated practice and continuous reinforcement are necessary for establishing lasting cognitive-emotional restructuring. To balance this, the experts suggested a phased scheduling model: implementing high-frequency weekly sessions during the first month to build momentum, followed by biweekly or monthly check-ins to monitor progress and recalibrate the interventions. This pacing prevents institutional disengagement while respecting the psychological boundaries of youth (Lakind et al., 2022)

4.3.2 Technique Adaptability

In determining the operational viability of NLP in juvenile justice, adaptability emerged as a paramount thematic priority among experts. The expert panel widely agreed that juvenile offenders do not constitute a homogeneous group; rather, they present highly differentiated baselines of cognitive maturity, emotional regulation, and prior exposure to psychological concepts. Consequently, a one-size-fits-all application is fundamentally flawed, reinforcing the mandate advanced by Ewing et al. (2015) that psychological interventions must be dynamically tailored to individual developmental trajectories to produce meaningful outcomes.

For instance, the experts noted that cognitively demanding modalities such as “Reframing” which necessitates a sophisticated capacity to reinterpret adverse lived experiences, may inadvertently alienate younger or less cognitively developed juveniles. For this demographic, sensory-grounding techniques such as “anchoring” offer a more viable entry point, given their concrete, experiential nature, which bypasses the need for abstract linguistic reasoning (Sharma et al., 2023). This strategic sequencing aligns with trauma-informed guidelines that advocate for establishing somatic familiarity and emotional safety before advancing to higher-level cognitive restructuring (Psych Central, 2022). Expert 1 illustrated this point as follows:

“It’s about meeting them where they are. You can’t expect a 14-year-old with limited self-awareness to grasp subtle reframing right away. Starting simple builds trust and paves the way for deeper techniques later.” (Expert 1)

Furthermore, the experts highlighted 'rapport-building' as an absolute prerequisite for any subsequent technique, given the deep-seated mistrust and defensive behaviour typical of institutionalised youth (Lavoie et al., 2021). They also stressed the need for cultural attunement, particularly within Southeast Asian contexts, by tailoring the language, metaphors, and idioms used in NLP to match the lived realities of the youth, which significantly enhances therapeutic engagement (Liu et al., 2024).

4.3.3 Session Duration

Regarding temporal structure, the consensus among the experts pointed to an optimal session length of 20 to 60 minutes, explicitly designed to align with adolescent attention spans and cognitive processing limits. Rather than conducting a continuous lecture, the panel suggested a two-tier structure: 30 to 40 minutes dedicated to the interactive NLP intervention, followed by a brief, focused debrief for

reflection, goal-setting, and consolidation. This deliberate pacing mitigates the risk of cognitive overload, which can otherwise trigger resistance or emotional fatigue. Expert 4 noted:

“Sessions longer than an hour risk fatigue and disengagement. The goal is quality, not quantity. Brief, targeted interventions work best, especially when combined with homework or practice tasks between sessions.” (Expert 4)

Experts also indicated that the session length should vary according to the technique employed. Visualisation-intensive techniques, such as the Swish Pattern and Circle of Excellence, were said to require more time, whereas rapport-building conversations and brief anchoring exercises could be delivered within shorter timeframes. Practical constraints, including facility scheduling and institutional security protocols, were identified as factors that required flexibility and close coordination with rehabilitation staff.

4.3.4 Measuring Effectiveness

Experts acknowledge that evaluating the effectiveness of NLP-based interventions is inherently complex, given that relevant indicators span both observable and abstract psychological dimensions. Consistent with this, they recommended a combination of evaluation strategies, including

- a. Pre- and post-intervention self-esteem inventories: Standardised scales (e.g. the Rosenberg Self-Esteem Scale) adapted for adolescent populations can quantify shifts in self-perception (Robins et al., 2001).
- b. Qualitative journals or reflective diaries: Encouraging juveniles to record their thoughts, emotions, and progress provides insight into internal changes and the personal relevance of techniques (Bolton, 2010).
- c. Behavioural indicators: Observable changes, such as improved punctuality, increased cooperation, respectful communication with staff and peers, and reduced disciplinary incidents, serve as practical proxies for enhanced self-mastery and self-efficacy (Cullen et al., 2020).
- d. Language analysis: Experts noted the value of monitoring changes in language use during sessions, such as the increased use of positive affirmations, goal-oriented statements, and reduced negative self-talk, as signs of shifting cognitive frameworks (Zhang et al., 2026).

As Expert 2 concisely summarised, an effective tracking system must be continuous and holistic.

“No single measure tells the whole story. Combining self-reports with observations and therapist notes creates a fuller picture of progress” (Expert 2).

Continuous, rather than one-off, assessment was considered essential, as experts noted that ongoing monitoring helps to detect meaningful change and identify areas requiring further reinforcement.

5.0 Discussion

This study evaluated a comprehensive pool of NLP techniques through structured expert consensus to identify which modalities are perceived as the most viable for enhancing self-esteem within juvenile rehabilitation settings. The resulting seven core techniques—Rapport, Mind to Muscle, Reframing, Visual Squash, Circle of Excellence, Developing Self-Appreciation, and the Swish Pattern—align seamlessly with contemporary adolescent rehabilitation paradigms (Hein et al., 2020) while providing practitioners with concrete, actionable communicative tools.

The universal endorsement of “Rapport” across the evaluated self-esteem domains firmly establishes it as a foundational prerequisite, rather than an isolated, domain-specific tool. This unanimous expert agreement mirrors the broader therapeutic literature, which maintains that a resilient therapeutic alliance rooted in mutual trust and non-judgemental safety is mandatory before adolescent clients can engage with deeper cognitive interventions. This dynamic is especially critical for institutionalised youth, who

frequently exhibit severe emotional guardedness and systemic distrust towards authority figures (Shirk & Karver, 2003).

Within the self-mastery domain, the high consensus surrounding “Mind to Muscle” highlights the vital necessity of bridging cognitive awareness with tangible behavioural execution. This technique assists juveniles in converting intellectual realisations into daily, observable habits, addressing a critical deficit in delinquent youth: the inability to translate positive intentions into impulse control and regulated behaviour (Hudd & Moscovitch, 2023).

Similarly, the prioritisation of “Reframing” extends far beyond simply mitigating internal shame or institutional vulnerability; it actively fosters cognitive flexibility and adaptive problem-solving skills. As Singh et al. (2021) argued, developing this specific cognitive agility is imperative for systematically disrupting negative self-beliefs and building psychological resilience against future environmental stressors.

In the domain of self-efficacy, “Visual Squash” and the “Circle of Excellence” provide highly structured, imagery-based interventions to resolve internal psychological conflicts and access resourceful emotional states. These techniques are highly valuable for offenders navigating severe emotional dysregulation, providing them with immediate, tangible strategies to manage intense affect while incrementally stabilising their personal identity (Gross, 2015).

Finally, the retention of “Developing Self-Appreciation” and the “Swish Pattern” within the self-liking and competence domains directly addresses the necessity of neutralising self-stigmatisation. For juvenile offenders heavily burdened by residual guilt, shame, or systemic trauma, these techniques facilitate the reconstruction of a constructive and dignified self-image. Rebuilding this intrinsic sense of worth is directly linked to enhanced long-term motivation and sustained compliance with rehabilitation guidelines (Kakonge et al., 2022)

Synthesising these findings indicates that cognitive, emotional, and linguistic NLP strategies do not operate in isolation; rather, they act as complementary mechanisms for tackling the multilayered architecture of self-esteem deficits. When integrated into a unified curriculum, these seven expert-endorsed techniques offer a viable blueprint for transitioning correctional facilities away from basic behaviour-management models towards holistic, psychologically transformative programmes (Fletcher et al., 2023). However, it must be noted that these insights reflect the structured perceptions of seasoned practitioners rather than longitudinal empirical data; the degree to which this theoretical complementarity translates into verifiable behavioural outcomes in youth populations remains a critical subject for future field testing.

5.1 Implications for Practice

The seven expert-endorsed techniques provide candidate components for the future development of a communication-centred rehabilitation module. However, because the techniques were evaluated by practitioners rather than tested with juvenile participants, the findings do not establish their feasibility, effectiveness, or immediate operational value. Any proposed module should first be developed collaboratively with juvenile-justice professionals, qualified mental-health practitioners, educators, and safeguarding specialists. It should subsequently undergo ethical review, feasibility testing, and controlled empirical evaluation.

If the module is piloted, practitioners should receive structured training in its procedures, ethical boundaries, safeguarding requirements, and developmentally appropriate delivery. Implementation fidelity should also be monitored because practitioner training, adherence, delivery quality, and participant responsiveness can affect intervention outcomes (Breitenstein et al., 2010). NLP certification alone should not be treated as evidence of competence to deliver a psychological intervention in a juvenile justice setting. Similarly, the module’s suitability for young people with different cognitive, emotional, linguistic, and cultural backgrounds must be assessed rather than assumed.

The findings may also inform exploratory research in educational settings. Previous studies have examined NLP-based activities with school and language-learning populations and have reported some positive educational and psychological outcomes (Manana et al., 2024; Zhang et al., 2023). Nevertheless, these findings cannot be generalised to at-risk students or interpreted as evidence that NLP prevents delinquency. Before the proposed techniques are incorporated into school counselling or character-development programmes, their acceptability, safety, cultural appropriateness, and effects on clearly defined outcomes should be evaluated with the intended student population.

5.2 Limitations and Future Research

This study has several limitations. First, the expert panel comprised only five practitioners working in the Malaysian context, limiting the transferability of the findings to other cultural and institutional settings. In addition, all participants were certified NLP practitioners, which may have introduced professional-allegiance bias into their assessments (Munder et al., 2013). Future studies should include a larger and more heterogeneous panel comprising NLP practitioners, juvenile-justice professionals, psychologists, social workers, educators, and individuals with lived experience of juvenile rehabilitation.

Second, the study relied exclusively on expert judgement and did not include juvenile participants, correctional staff, or field-based implementation. The seven selected techniques therefore represent perceived relevance and content validity rather than evidence of feasibility, acceptability, safety, or intervention effectiveness. Moreover, the literature review identified no direct empirical evaluation of these techniques among juvenile offender populations. The findings should consequently be treated as a preliminary basis for module development rather than evidence of intervention efficacy.

Future research should first examine the cultural appropriateness and acceptability of the proposed techniques through consultation with juvenile participants and relevant institutional stakeholders. Subsequent feasibility and pilot studies should evaluate implementation fidelity, potential adverse effects, participant engagement, and clearly defined psychological and behavioural outcomes. Researchers could also investigate whether selected NLP techniques offer any additional benefit when incorporated into established approaches such as cognitive-behavioural interventions, which have a stronger evidence base in juvenile rehabilitation (Lipsey, 2009). Although mindfulness-based interventions have also been examined among young offenders, their evidence remains preliminary and should not be overstated (Simpson et al., 2018). Cost-effectiveness and scalability should be assessed only after the module has demonstrated adequate safety, feasibility, and preliminary effectiveness.

6.0 Conclusion

This study aimed to identify and evaluate NLP techniques that certified practitioners perceived as potentially relevant to self-esteem development among juvenile offenders in rehabilitation contexts. Through systematic card sorting and semi-structured interviews with five certified NLP practitioners, seven techniques, namely, Mind to Muscle, Rapport, Reframing, Visual Squash, Circle of Excellence, Developing Self-Appreciation, and the Swish Pattern, emerged as the most consistently endorsed across the four self-esteem domains of self-mastery, self-efficacy, self-liking, and competence.

Expert validation suggests that these techniques may offer preliminary utility as communication-based tools within structured frameworks for juvenile rehabilitation. Collectively, they address a range of psychological processes, including cognitive restructuring, emotional self-regulation, and motivational development, which are theoretically associated with self-esteem and prosocial behaviour among at-risk youth. However, it is essential to emphasise that these conclusions are grounded solely in expert evaluations and have not been empirically tested with juvenile offender populations. Therefore, the findings should be understood as expert-informed and directional rather than conclusive.

From a practical standpoint, these findings offer a structured, communication-based perspective to inform the development of juvenile rehabilitation modules. By addressing underlying psychological dimensions such as self-worth, agency, and interpersonal competence, NLP-informed strategies may complement existing behavioural and therapeutic approaches within correctional programmes.

Expert validation is particularly important for supporting the development of a robust NLP-informed rehabilitation module. Such validation represents a significant step towards transforming juvenile rehabilitation from a primarily disciplinary process into a more growth-oriented space that fosters personal development and emotional resilience. Psychological components such as self-mastery, self-value, self-liking, and competence must be addressed because they can equip young offenders with the internal resources required for reintegration into society. Continued study and practice-based refinement of the module may further contribute to this field by supporting reductions in recidivism and promoting sustained positive outcomes for young offenders and society at large.

Continued research in this direction may contribute to more evidence-informed, holistic, and psychologically responsive approaches to juvenile rehabilitation, ultimately supporting the long-term reintegration of young offenders into society.

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Conflict of Interest

The authors have declared that no competing interests exist.

Author Contribution Statement

NSCI: Conceptualization, Data Curation, Methodology, Validation, Writing – Original Draft Preparation, Visualization. SHM: Project Administration, Supervision, Writing – Review & Editing. MBM: Project Administration, Supervision, Writing – Review & Editing. CRA: Conceptual Input, Validation, Writing – Review & Editing.

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Ethics Statement

This research did not require formal Institutional Review Board (IRB) approval because it involved non-clinical, minimal-risk research with professional experts participating in their capacity as practitioners. No vulnerable populations were involved, no personally identifying information was collected, and participation was voluntary, with informed consent obtained from all participants. The study adhered to institutional and international ethical guidelines for research involving human participants.

Data Access Statement:

Research data supporting this publication are available upon request to the corresponding author.

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Appendix A

Frequency of NLP Techniques Identified in Literature

No.	Technique/Pattern	Total of Scholars
1.	Perceptual Position	50
2.	Disturbing Memories	50
3	Time	20
4	Swish Pattern	20
5	Modelling	17
6	Calibration	17
7	Visual Access	16
8	Self-Talk	16
9	Mind to Muscle	16
10	Eye Assessing Cues	16
11	Sub modalities	14
12	Cognitive Error	14
13	Metaphor	11
14	Hierarchical/ Nested Organization	11
15	Distinctions In Language	11
16	Confidence	11
17	Syntax	10
18	Six Step Reframing	10
19	Internal Sensory Representation	10
20	Imagery	10
21	Rapport	9
22	Flexibility	9
23	Visualization/ Imaginal	8
24	Reexperience	8
25	Spelling Strategy	8
26	Progressive Relaxation	8
27	Presuppositions	8
28	Meta Questioning	8
29	Meta Program	8
30	Meta Model	8
31	Circle Of Excellence	8
32	Vk/D-Rtm Ptsd	7
33	Visual Squash	7
34	Allergy Pattern	6
35	Anchoring	5
36	Acting As If	5
37	Well-Formed Outcomes	3
38	Reframing	3
	Developing Self-Appreciation	3

No.	Technique/Pattern	Total of Scholars
39	Alleviation Of Distress	3
40	Sunflower Therapy for Dyslexia	2
41	Self-Efficacy	2
42	Parental Anger	2
43	Pain Control	2
44	Skill Acquisition	1
45	Phobias/Timeline Trauma	1
46	Marital Adjustment	1
47	Headache	1
48	Bulimia	1
49	Anxiety	1
50	Addiction	1