Implementation of behavior modification techniques for persons with mental disorders with low social skills (Case Study at Sentra Phalamartha Sukabumi, West Java, Indonesia)

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Abstract

Research on the application of behavior modification to improve social skills in mental disorders (PMD) at Sentra Phalamartha Sukabumi. Some of the techniques used are positive reinforcement, systematic desensitization, and other similar techniques based on different needs. An experimental Single Subject Design (SSD), including an A-B-A model, was used to assess intervention efficacy. The participants were two individuals with a deficiency in social skills — such as a healthy morning routine and periodic worship. The data gathering methods included observation, interviews, and Likert scale tests. Findings showed that the use of behavior modification methods was effective in improving the social skills of the participants. Maladaptive behavior was observed during the baseline, with an improvement following treatment. The intervention processes focused primarily on individuals and were positively effective at helping the subjects overcome their social hurdles. Interventions were conducted in the environment offered by Sentra Phalamartha. The outcomes of this study contribute to the establishment of micro and mezzo social work institutions and the utilization of behavior modification skills. It is anticipated that the results could serve as a reference for practitioners in social rehabilitation efforts to enhance the social function of persons with mental disorders based on their needs.

Keywords: Behavior modification techniques, Persons with Mental Disorders (PMD), Sentra Phalamartha Sukabumi, Single Subject Design, social skills.

1. Introduction

Physical health is something that gets a lot of attention, but mental health is a subject that should receive equal importance since it plays a large part in our everyday life. The World Health Organization (WHO) defines mental health as "a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work

productively and fruitfully, and is able to contribute to his or her community" [1]. Good mental health is a key solution to how an individual acts in the social sphere, such as communication, interaction, and forming relationships with others. However, the problem with mental health issues is that they are very often neglected despite having a huge effect on individuals and society.

Mental health problems in Indonesia also continue to increase. Based on the Indonesian [2], 1 in 5 Indonesians is at risk of suffering from mental health disorders ranging from mild to severe. Keliat and Akemat [3] state that untreated mental disorders can disrupt the biological, psychological, social, and spiritual functions of individuals. A key consequence of mental disorders is the impairment of social skills, which includes communication and interpersonal skills, and the ability to adapt to social environments.

Because there are psychosocial barriers, people with mental disorders (PMD) often cannot socialize properly and cannot perform their social roles. According to Townsend [4], mental disorders are maladaptive responses to internal or external stressors that lead to dysfunction in emotional, cognitive, and regulatory functions. Such conditions can lead to maladaptive behaviors, including social withdrawal, aggression, or an inability to carry out daily life activities. In Indonesia, however, the profound struggles of individuals with mental disorders are exacerbated by social stigma that marginalizes people with mental disorders and deprives them of access to reasonably good health care services [5].

Thus, due to the awareness raised on the importance of mental health, different strategies have been designed to assist people with mental disorders in improving their social abilities. Using behavior modification techniques is one traditional and effective way. Behavior modification is a systematic therapeutic approach that applies established learning principles to change individual behavior [6]. This group of methods, including positive reinforcement, systematic desensitization, and token economy, aims to teach adaptive behaviors and diminish maladaptive behaviors. Stages in behavior modification include recognizing the behaviors that require modification, defining the goals for behavioral change, instructing the procedures to achieve the goals, and assessing results [7].

One of the most widely used types of behavioral modification interventions applied in social rehabilitation is social skills training. Social skills training focuses on helping individuals learn and develop skills needed to interact successfully with their social milieu [8]. It is founded on the idea that these social skills can be taught and improved using instruction, modeling, rehearsal, and feedback [9]. Additionally, the goal of social skills training is to increase putative self-control, diminish anxiety, and strengthen self-esteem among people with mental disorders [10].

In Indonesia itself, Sentra Phalamartha Sukabumi plays a role in social rehabilitation for people with mental disorders. Sentra Phalamartha is a Technical Implementation Unit (UPT) of the Indonesian Ministry of Social Affairs that provides Social Rehabilitation Assistance (ATENSI) services aimed at enhancing the social functioning of client beneficiaries. This encompasses a range of implementations – from social skills training to community-based therapy. Referring to the Regulation of the Minister of Social Affairs No. 7 of 2021, ATENSI services at Sentra Phalamartha are implemented systematically, holistically, and standardized to accommodate the individual needs of the target groups fully.

The research subject is the application of behavior modification with the aim of changing the intensity or frequency of social skills in persons with mental problems at Sentra Phalamartha. Some of the techniques used include positive reinforcement, systematic desensitization, and token economy. According to Skinner [11], positive reinforcement is when a positive stimulus is presented after a behavior in order to increase or strengthen that behavior. According to Stampfl [12], systematic desensitization is a method for diminishing anxiety through gradual exposure to anxiety-evoking stimuli. Token economy, on the other hand, is a merit system in which people receive tokens for being good and can exchange these tokens for certain goods or activities [13].

Although it seems simple to apply the behavior modification techniques, the first step is to understand individual characteristics and their needs. Behavior modification should be systematic and tailored to individual cases [14]. For this reason, this research study uses a Single Subject Design (SSD) with an A-B-A model to assess the efficacy of the intervention. This method enables researchers to compare behavior in an individual before and after the intervention and evaluate changes as the intervention occurs [15].

This study is of utmost importance to be carried out in relation to the social rehabilitation of individuals in Indonesia, especially for improving the social functioning of people with mental disorders. Within this framework, the study will contribute toward micro and mezzo social work practice by translating established behavior modification strategies into consistent and scientifically-based community practices. In addition, the results of this study should be useful to practitioners and policymakers of social rehabilitation in the development of more effective and sustainable interventions.

More specifically, the study aims to answer the questions: What kind of research subjects are the informants? What are the titles and implementation of behavior modification techniques? How do the social skills of the informants change before and after the assessment? What is the process of implementing the behavior modification techniques? And how much do informants' social skills actually improve through the use of behavior modification techniques? Answers to these questions will help us understand the role of behavior modification as a tool in the social rehabilitation of mentally disordered persons. In so doing, this research contributes not only to the scientific literature in general but also has some wide-ranging practical implications as well. More generally, this paper adds to the literature on how to deliver rigorous and quantified evidence-based interventions in order to help individuals live well with mental disorders. The integration of behavior modification approaches as presented in this study can be adopted as a model in other social rehabilitation institutions in Indonesia.

2. Research Methodology

This research is quantitative and uses a single-subject design with an experimental research type (SSD) following the A-B-A model. It includes three phases: the first baseline (A1), intervention (B), and second baseline (A2). This approach

was selected to examine the implementation of a behavior change approach that is useful for improving the social skills of patients with mental disorders (PMD) in depth. This research was conducted at Sentra Phalamartha Sukabumi, which has adequate infrastructure and targets. Sampling in this study was done using purposive sampling based on inclusion and exclusion criteria; the subjects were two female individuals with mental disorders, aged 24 and 62 years. Data were collected through observation, interviews, Likert scale, and documentation. In addition, positive reinforcement, systematic desensitization, token economy, and role-playing were applied.

Within a span of two weeks, the intervention was administered to each subject daily for a duration of 1–2 hours. Here, we used graphic representations of levels, trends, and stability of data types, as well as qualitative interpretation of observations and interviews, to descriptively show changes in the behaviors of subjects. In order to ensure that the research instrument had validity and reliability, the research instrument was validated by experts in social work and then retested for reliability. Ethical considerations: The study was conducted in accordance with the ethical principles of research, including informed consent, data use and confidentiality, and nonmaleficence. This research is a systematic study that can contribute to the improvement of social skills of persons with mental disorders, and it can serve as a model of intervention for social rehabilitation institutions in Indonesia.

3. Research Results

3.1. Study Area Description

This research was conducted at Sentra Phalamartha Sukabumi, an institution under the auspices of the Ministry of Social Affairs of the Republic of Indonesia. This center has the main purpose of providing social rehabilitation for people with mental disorders (PMD). Sentra Phalamartha provides a supportive environment and adequate facilities that make the rehabilitation program fully implemented, systematic, holistic, and standard operations contribute to enhancing the quality of life of the beneficiaries.

There are multiple strategic factors for which this place was selected as the site of research. Sentra Phalamartha has all the facilities such as training rooms, dormitories, counseling spaces, and a group activity center. Such facilities are there to meet the needs of social rehabilitation and create a suitable environment for their recipients. Additionally, conducting this study was highly dependent on the availability of professionals such as case managers, psychiatrists, and caregivers. The ATENSI services provided by the center pay attention to the physical, psychological, and social needs of PTSK, which aim to give a holistic service approach concept.

The various services offered at this center include social skills training, psychosocial escort, and community-based therapy. Sentra Phalamartha, in support of this study, allocated comfortable counseling space, a decent living environment, and sufficient group activity space. These facilities were crucial in developing a conducive environment for the implementation of the interventions and witnessing how beneficiaries were able to adopt and maintain changes in behavior.

Description of the type of subjects that were used for the research: This study was conducted with two subjects who were selected based on predetermined inclusion and exclusion criteria. Here are the profiles of both subjects:

- Subject 1 (SA)
  Gender: Female
  Age: 24 years
  Origin: Lampung

Case Background: SA is a deportee from Malaysia whose social skills are punishment-difficulty. Notable bad behaviors consist of struggling to wake at dawn as well as irregularity in carrying out prayers. SA has stayed at Sentra Phalamartha for four years, which is a clear indicator of the need for social guidance and the learning of adaptive skills.

- Subject 2 (NA)
  Gender: Female
  Age: 62 years
  Origin: Bandung

Origin: NA has come to Sentra Phalamartha as a new beneficiary. Despite fair social interactions, she needs social skills to adapt and function better. You can see from her posts every day that she struggles to cope when faced with something difficult, like receiving criticism, and often goes off on unrelated tangents.

3.2. Intervention Process

This intervention had three phases: baseline 1 (A1), intervention (B), and baseline 2 (A2). It involved determining the baseline for individuals and intervening with appropriate social skills to see if behavior changes could be sustained after the intervention period.

3.3. Initial Baseline Phase (A1)

The first social skills of the subjects were identified through observations without any interference. The findings are as follows:

- Subject 1 (SA): SA exhibited dysfunctional behaviors, including waking up at dawn (around 7:00 am) and irregularity in rituals. SA was often passive when approaching group activities and would subsequently regress to social isolation.
- Subject 2 (NA): NA exhibited a greater level of adaptive behavior compared to SA; however, when facing difficult circumstances, such as being criticized, things became challenging for NA. She also manifested a pattern of discussing a wider range of non-contextual topics excessively, all of which hint toward deficits in adaptive communication.

3.4. Intervention Phase (B)

Full content: Layered, behavior modification-based approach, positive reinforcement, token economy, etc. designed to be a two-week intervention. Full salt data set 2 ended up being a role player, classic behavior modification layout, reinforcement. The results found in the intervention phase are:

3.5. Subject 1 (SA)

Good Morning: SA finally improved on her waking up early. SA consistently awoke before 6:00 AM during the second week of the intervention. For example, Religious Practices: SA started doing all five prayers daily after being reinforced by social workers who complimented SA for setting an example for other children in the center. Social Engagement: SA showed improvement in engagement in group activities (e.g., group interactive games and discussions). The powers of the token economy system supported this change, which gave SA tokens for active participation.

3.6. Subject 2 (NA)

Adaptive Communication – NA learned to have more control over the length and context of her conversations. Role-play scenarios were conducted in which NA was able to successfully accept criticism in a constructive manner.

Social Skills: After learning skills to participate more in some social activities, NA started to help dorm mates and other group members.

3.7. Second Baseline Phase (A2)

The main aim of this phase was to determine if the behavior changes achieved in the intervention phase could be retained following the intervention. The findings are as follows:

Participant 1 (SA): SA was able to stick to her morning schedule and continue her spirituality quote. However, her participation in group activities decreased a bit, but it was better than during the A1 phase. Subject 2 (NA): NA showed adaptive communication and socialization throughout the session consistently. She also started independently assisting her peers without being told.
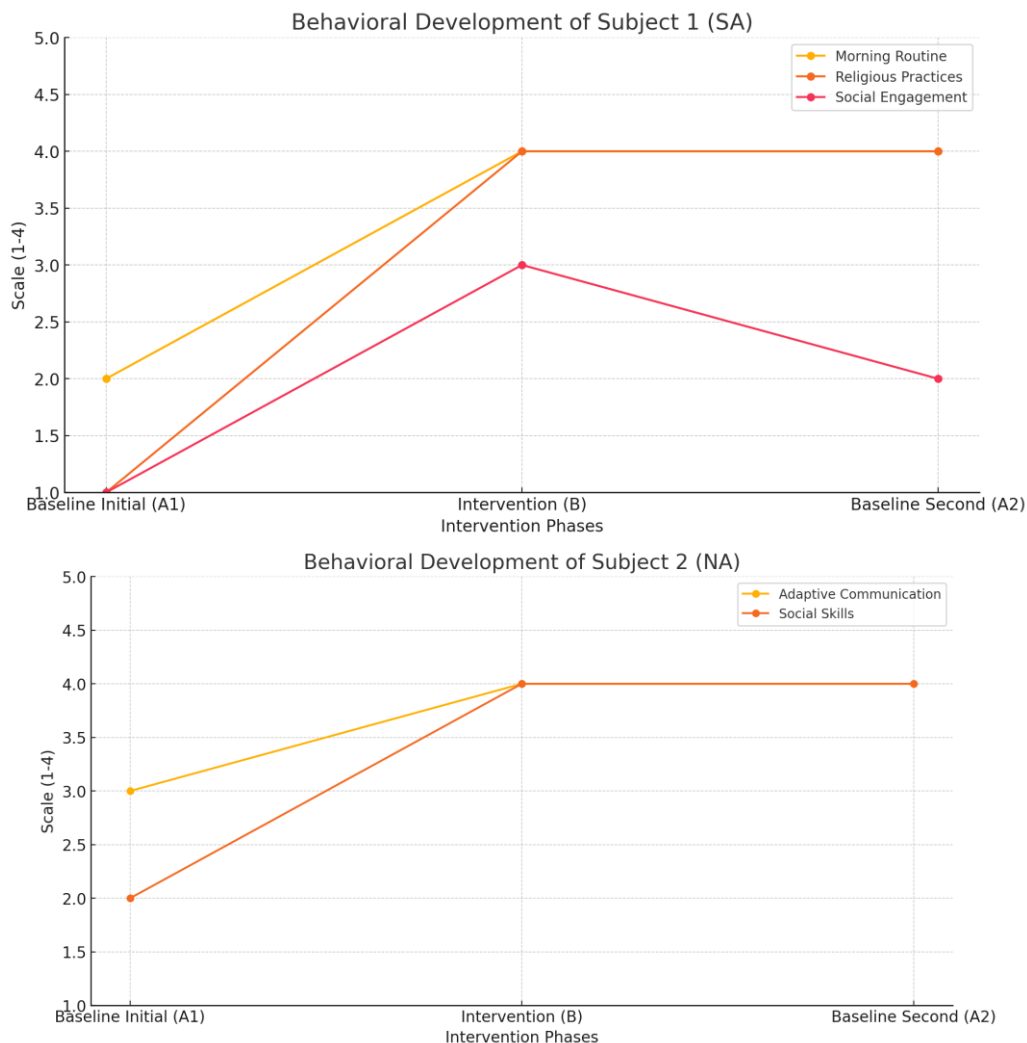
Figure 1.
Graph of the behavioral development of two subjects (SA and NA) in various intervention phases.

The trajectory of behavioral growth for both subjects (SA and NA) during the two main phases is depicted in the line graphs above.

Progress of Subject 1 (SA) over Time:
- Mean scores for morning routines, religious practice and social engagement were substantially improved during the intervention.
- Phase 2 baseline reflected a small decrease in the social engagement of P1 compared to Phase 1. However, overall social engagement in Phase 2 remained higher than that of Phase 1.

Behavioral Development of Subject 2 (NA):

During and after the intervention, adaptive communication and social skills improved steadily. The targeted behaviors remained consistent throughout the second baseline phase.

3.8. Data Analysis
3.8.1. Behavioral Changes

Results from the Graphs Analysis phase show that both subjects had high rates of engaging in adaptive behaviors in the intervention phase. Subject 2 (NA) showed this improvement more sustainably, and this may be attributed to their superior baseline social skills compared to those of Subject 1 (SA).

3.9. Sustainability of Changes

During the second baseline (A2) phase, both participants were able to continue most of the adaptive skills that were taught. This shows that the behavior modification techniques used are quite effective in producing lasting changes, particularly in daily habits.

3.10. Tracking Patterns of Response to Behavioral Modification Strategies
- Utilization of Positive Reinforcement: Positive reinforcement helped in increasing both subjects' adaptive behaviors significantly, especially in early morning waking and performing religious practices.
- Token economy: The token system was able to effectively strengthen subjects' motivation to participate in cooperative group activities.
- Role-Playing: This method enables participants to rehearse social skills within structured scenarios.

These behavior modifications also support the results concluded by Stuart and Laraia [9] that behavior modification is able to achieve improvement in the social skills functions of people with mental disorders. Skinner [11] states in general that positive reinforcement is crucial in developing adaptive behaviors, which we reversed an intentional paradigmatic reliance on within our work.

Moreover, the fact that token economy was used as a behavioral reinforcement strategy in the current context well matches with Kazdin [13], who concluded that token systems can be very useful in encouraging individuals to achieve a target behavior. The use of the role-playing method also reinforces Bulkeley and Cramer [16], who claimed that mimicking social situations enables individuals to learn through vicarious experience.

The study also highlighted a number of challenges, including the need for supervision during the second baseline phase (A2) to maintain behavioral changes. Respondents elaborated. As an example, the first line of Subject 1 (SA) shows that the overall group scored a decrease in activity participation after the intervention (the intervention timeframe is sorted from left to right). This suggests that focusing on adaptive behaviors is an effort but can certainly be sustained through social workers' involvement.

The results show that techniques of behavior modification using positive reinforcement, token economy, and role play have effectively improved the social skills of persons with mental disorders (PMD). The positive changes shown by both the students reflect a great possibility of such measures being successfully implemented in social rehabilitation institutions. However, more research is necessary to investigate the determinants of the sustainability of changes in behavior over the long term. Based on the results of this study, it is expected that social rehabilitation programs at Sentra Phalamartha and other similar places will teach behavior modification methods as part of a systematic approach to improve the capacity of PMD to adapt to the social environment.

4. Discussion

Behavior modification techniques such as positive reinforcement, token economy, and role-playing have proven to be helpful in enhancing social skills among PMD. The success of the interventions is demonstrated by the large increase in adaptive behaviors during the intervention phase (B), which were largely maintained over the second baseline phase (A2). These results support the theory that approach methods which utilize behavior modification are associative methods for improving social functioning in those affected by mental disorders.

Skinner [11] states that if you use positive reinforcement, such as praise or rewards, whenever a desired behavior occurs, then that behavior is likely to be repeated. For instance, the subjects executed positive reinforcement through the establishment of habits by waking up in the morning and performing the five obligatory prayers. This is perfectly aligned with the theory of operant learning, which states that new behaviors are reinforced in the environment.

Moreover, token economy, which is a positive behavioral reinforcement method, was found to enhance the motivation of subjects to participate in group activities. Token systems, as described by Kazdin [13], offer motivation to pursue predetermined behavioral goals in a precise and quantifiable manner, albeit with some flexibility. There, tokens provided for

adaptive behaviors were redeemable for favored rewards to reinforce their maintenance. Role-play, a type of social learning, permitted subjects to rehearse their social skills in a risk-free and controlled setting. In fact, role-playing is one of the best approaches for teaching social skills to socially limited individuals [9]. With this approach, the subjects could learn from practical simulations and gain more confidence in real situations accordingly.

Results indicate a noticeable improvement in the social skills domains of both cases. Subject 1 (SA) woke up early, prayed, and was seen attending group activities by the observer. This improved behavior was documented by the observer. SA showed passive behavior and withdrawal from social media before the intervention. On a positive note, SA started becoming more participative in group activities after the behavior modification techniques were applied.Bandura [17] highlights that interpersonal skills are learned through direct experiences and social reinforcement, thus supporting a non-cognitive approach.

Results: Adaptive communication and social engagement improved significantly in Subject 2 (NA). NA, as an older person, accepted criticism with more grace and demonstrated behavior that initiated a service to others. These modifications are in accordance with the theory of social learning, which states that people learn from observation and experiences [17]. Interviewing the patient is a form of role-play with communication skills practice, but the national assessment is a realistic scenario that made NA the most effective for this intervention.

While both subjects demonstrated adaptive behavioral changes, their sustainability was different for SA and NA. During the second baseline (A2), SA observed a small reduction in group participation, although early rising and prayer remained as habits. This suggests that behavioral changes have the potential to endure, but that behavioral strategies may need to be maintained to support them [13, 18], which in turn would suggest that the sustainability of the intervention effects is unlikely in the long term without such reinforcement.

While the behavior modification techniques have shown success in this study, this study also identifies numerous barriers to implementation. The first issue was that they needed to be monitored continuously in the second baseline phase so that these changes in behavior could be sustained when the experimenter wasn't around. However, the decrease in SA's group participation after the cessation of the intervention shows that further social reinforcement may be required to sustain motivation.

Moreover, methods like token economy demand an organized and consistent environment to implement effectively. If not used consistently, the child will no longer have the desire to reach the behavioral goals. As noted by Lawrence, et al. [19], behavior modification works best when reinforcement principles are used consistently. Another issue will be the differences in individual responses to interventions. Younger subjects like SA need something much more intense to learn social skills from the ground up. However, for older subjects like NA, it aims to build on what is already there. This is in accordance with Miltenberger [20] statement that behavior interventions have to be modified according to specific persons.

This research has provided attributions to social rehabilitation practices in Indonesia, especially regarding the development of social skills in PMD. Utilizing behavior modification strategies would enable institutions like Sentra Phalamartha to create more efficient, evaluable programs to work on social function in PMD. Theoretically, this study corroborates the existing empirical evidence supporting the application of behavior modification techniques in improving social skills. Such results are in accordance with earlier studies, e.g., Bulkeley and Cramer [16], which found role-playing and reinforcement strategies to be successful in treating people with social deficits. The findings also lend support to Bandura [17] social learning theory, which stresses the role of direct experiences as well as social reinforcement in the acquisition of interpersonal skills.

These findings support the practical implications of this study to ensure the longevity of behavioral changes. A community-based approach to entering social rehabilitation institutions as post-rehabilitation allows for social reinforcement after the rehabilitation program for PMD. Additionally, it is also important to train support staff, such as social workers and caregivers, to use techniques of behavior modification accurately and consistently.

This study supports earlier research demonstrating that behavior modification techniques generalize to enhance social skills in patients with mental disorders. Example: In Kneisl [21], the researchers used social skills training that included positive reinforcement and role-playing. The author mentioned how these types of interventions assisted people with schizophrenia in improving their social skills.

But this study reveals the necessity of a more tailored strategy that caters to people. Younger subjects such as SA need more extensive positive reinforcement before their new habits become ingrained. However, for older subjects like NA, the intervention is more about maintaining and building on existing skills. Miltenberger [20] indicated that intervention success hinges on individualized initiatives, which implies that the same level of success may not be obtained if others were to use the same intervention.

The findings in this study provide insight into the importance of behavior modification techniques in enhancing the social abilities of PMD. Although their implementations come with challenges, such as positive reinforcement, findings suggest that the token economy allows for significant potential to benefit an individual with a mental disorder and improve their social functioning within role-played environments. Provided that this approach is nuanced, the necessary support will be offered, and that adaptive methods are proposed, these techniques have the potential to play a central role in the rehabilitation of social offenders in Indonesia.

5. Conclusion

The purpose of this study was to implement behavior modification to enhance the social skills of individuals with mental disorders (PMD) in Sentra Phalamartha Sukabumi. Using a Single Subject Design experimental framework over three phases (baseline - A1, intervention - B, and second baseline - A2), positive reinforcement, token economy, and role-playing were

shown to be effective in acquiring and maintaining adaptive behaviors. The results of the study demonstrated improvement in both subjects. For example, Subject 1 (SA) showed improved social skills such as waking up early, praying together, and participating in group activities. Even though a small decrease in group participation occurred in the second baseline (A2), the habits established remained, as this strengthens adequate behaviors through positive reinforcement.

Part II (to self), as a relatively older person, improved in the flexibility of adaptive communication: namely, criticism acceptance and social integration regarding Subject 2 over time. Using role play proved valuable to NA in polishing communication skills through structured social experiences. Such outcomes are consistent with Bandura [17] social learning theory, which posits both direct experience and social reinforcement as the principal means to the acquisition of interpersonal skills.

In conclusion, behavior modification methods have proven effective in improving social skills in people with mental disorders. The motivation for subjects to maintain adaptive behaviors was positive reinforcement, while the token economy (another type of reinforcement) facilitated an effective reward system that supported active participation in group affairs. Additionally, the subjects learned and practiced social skills through role-playing, which increased their comfort level with social situations.

At the same time, this study also pointed to some practical difficulties in the application of behavior change methods. For example, there is evidence that supervision is required in the second baseline period to maintain the behavior change within that phase. In other words, younger subjects tend to require much more intensive interventions that develop social skills from the ground up, while older individuals with ASD tend to require the reinforcement of existing skills. Theoretical and Practical Implications: Following are the theoretical and practical implications of this study. Theoretically, the results can serve as an alternative for social skills training programs based on the principles of behavior modification in social rehabilitation institutions such as Sentra Phalamartha. Throughout this study, this research perspective contributes to the body of literature on the efficacy of behavioral modification techniques to improve PMD social functioning and supports theoretical considerations in social and operant learning.

Ongoing support is needed to maintain the sustainability of behavioral changes, such as through community-based approaches involving families and society as a whole; this would be a recommendation [22]. Even long-term studies are needed to assess the long-lasting outcomes of interventions in more extended environments. Therefore, social rehabilitation programs can be more adaptive and efficient to the social rehabilitation needs of persons with mental disorders, indirectly improving their quality of life.

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