Practical Psychotherapy

Behavioral Management in the Rehabilitation of a Person with Severe Mental Illness: The Path Less Travelled

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ABSTRACT

In severe mental illness (SMI), such as schizophrenia, rehabilitation begins immediately. Aside from the token economy, there is limited literature on behavioral modification (BM), which is a crucial aspect of rehabilitation for person with severe mental illness (SMI). We demonstrate the implementation and effectiveness of BM for one year in managing behavioral difficulties in a person with SMI. The direct observation method and the ABC functional analysis model were used for evaluation. Management, such as reinforcement and punishment, was implemented. Pre- and postassessments revealed a considerable decrease in problematic behaviors. This article also highlights the obstacles faced while managing the case and caregiver burden in rehabilitation. In persons with SMI, the application of BM enhances the patient's functionality and reduces the caregiver burden.

Keywords: Contingency management, positive and negative reinforcement, punishment, Premack principle, rehabilitation

Severe mental illness (SMI) is a group of the most severe mental disorders with considerable functional impairment.[1-3] Having onset early in adult life adds to the morbidity and burdens the caregivers. Aggression, poor social skills, and nonengagement are frequent behavioral problems in persons with SMI that impact their functionality. Citing functional impairment and resultant disability, early intervention upon the emergence of the initial symptoms of the disease is an important element in management.[4-6] In SMI, behavioral modification (BM) is integral to comprehensive rehabilitation. However, the literature on the use of BM in SMI focuses primarily on the token economy, thereby restricting the broader scope BM encompasses.

This article illustrates the application of BM other than token economy in rehabilitating persons with SMI. The goal is to exemplify the difficulties encountered throughout the process. It also highlights how giving sufficient attention to BM in SMI can facilitate the process of remission and recovery.

Study Setting

The index person with SMI was managed in a facility for inpatient rehabilitation services at the Mental Health Institute (MHI), Government Medical College & Hospital (GMCH), Chandigarh. The hospital has Disability Assessment Rehabilitation & Triage (DART) facility for SMI patients. It includes a daycare facility, halfway home facility, neuropsychological rehabilitation, social skill training, vocational rehabilitation facility, placement cell, crisis resolution, and home-based treatment (CRHT) facility, and disability certification cell. The institute provides both outpatient and inpatient rehabilitation services and has 40 beds.

Clinical Presentation

Accompanied by her elder brother, Ms. AK, a 32-year-old unmarried female from a middle socioeconomic status, presented with the chief complaints of irritability, aggression, odd behaviors, delusions, and hallucinations for the past 12 years. Her illness had an insidious onset with progressive worsening and had caused significant sociooccupational dysfunction. She was diagnosed with schizophrenia and had a history of polycystic ovarian disease (PCOD) and obesity. She had been hospitalized five times in the past three years with relapses consequent to noncompliance. Mental status examination revealed

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delusion of persecution, bizarre delusion, auditory hallucinations (second person), visual hallucinations, odd behavior, and delusions of love and misidentification, with the insight being 4/6. After attaining clinical stability, she was sent to the rehabilitation section for vocational training. During her vocational trials, a plethora of behavioral problems were observed. She did not participate in any ward activities, was argumentative and intrusive, remained authoritative with others, was preoccupied with the thought of marriage and job, and remained guilty of being a financial burden to her brother. She would repeatedly come to the treating team to talk, and if not responded to, she would get very agitated and verbally abusive. At home, the caregivers, too, noted a similar pattern of behavior. According to them, after every hospital discharge, she would disturb the whole family and talk only about marriage ("Since I am fine, why can't I get married?"). Despite being pacified, she would insist on marriage, become aggressive and verbally abusive, stop participating in household chores, and often become noncompliant with medications. Because these behavioral issues were the major obstacles to the treating team in planning vocational and psychosocial rehabilitation, she was referred for BM. The overall aim was to engage the patient and make her functional. Her problem behaviors identified for further management were intrusiveness, excessive phone calls, and nonengagement.

Assessments and Techniques

The direct observation method and the ABC model were employed for evaluation. With the direct observation method, we can record interactions, events, and behaviors as they happen in real time.[7] The ABC model is a functional assessment form to formulate problem behaviors.[8] Information was collected daily and weekly from the treating team, rehabilitation staff, and caregivers through interviews, observations, and review of clinical record.

Frequency, duration, and intensity ratings of the problem behavior were completed during ABC charting. On a 7-point Likert scale, the observers were instructed to give the excess behavior the following intensity rating: 1 = never, 2 = rarely (< 10% of the time), 3 = occasionally (about 30% of the time), 4 = sometimes (about 50% of the time), 5 = frequently (about 70% of the time), 6 = mostly (about 90% of the time), 7 = always (every time, i.e., about 100%). After discussion, the treating team divided the severity of the problem behavior into three categories: mild, moderate, and severe. The ratings of 2 and 3 were classified as mild, 4 and 5 as moderate, and 6 and 7 as severe. The following procedures were followed during the behavior intervention:

1. Identifying the excess behavior.
2. Charting and quantifying excessive behavior (using functional assessment—the ABC model).
3. Application of BM (Premack principle, positive and negative reinforcement, negative punishment, contingency management, and contingency contracting).
4. Sessions with caregiver.
5. Repeat assessment (**Table 1**).

Behavioral Modification

Premack Principle[9]

This uses high-preference activities as reinforcement for completing a low-preference activity. We identified the reinforcements using this method.

Contingency Management

This strategy tied reinforcements to the desired behavior.

Positive Reinforcement

This was applied to support fruitful engagement—for instance, verbal praise for attending more therapy sessions.

Negative Reinforcement

This was applied when the patient was not performing the expected tasks.

Negative Punishment

We reduced her troublesome behavior by subtracting the time spent in therapy sessions.

Contingency Contracting

This entails creating a written behavioral contract between the patient and the therapist that outlines the patient's performance of particular target behaviors in exchange for predetermined consequences. This method

TABLE 1.

ABC Charting of Patient's Excess Behavior and Pre- and Postassessment of Frequency, Duration, and Intensity.

Antecedent (A)	Behavior (B)	Consequence (C)	Assessment	Frequency	Duration	Intensity rating
1. Free time due to low engagement in activities 2. Availability of supportive persons	1. Intrusiveness toward treating team, staff, and fellow patients 2. Excessive phone calls to family members	Temporary reduction in distress	Intrusiveness			
			Preassessment	10–12 (times a day)	5–10 min	Moderate (50–70%)
			Postassessment	1–2 (times a day)	0–1 min	Mild (<30%)
			Phone calls			
			Preassessment	15–20 (times a day)	5–20 min/ per call	Severe (90–100%)
			Postassessment	2–3 (times a week)	1–2 min/ per call	Mild (<30%)

was employed during her home parole to manage her problem behaviors.

The patient's written informed consent was obtained. There were 45 sessions with the patient and 25 with the caregiver. Caregiver sessions covered expressed emotion and coping skills. The sessions' duration and time were kept flexible and individually tailored per the patient's and caregivers' needs. After management, postassessments were completed and compared to assess the effectiveness of the BM intervention.

Behavioral Intervention

The direct observation method and ABC charting were used as the baseline assessment. (**Table 1**). Rapport was established. After charting her problem behavior, we noticed that as her psychopathology settled, she would begin expressing worries about being unemployed, single, and a burden on her family. She would constantly come to the treating team to discuss these problems. She would come at inappropriate times and disturb the staff and fellow patients. She would start shouting and verbally abusing the treating team and staff. Later, she would continually phone the caregivers at inconvenient hours and cry aloud. Despite being pacified by the treating team, she would not listen or participate in any activities. After a discussion among the treating team, it was decided that she should use her excess behavior of approaching others to talk as reinforcement (Premack principle)[9] to increase her productivity. To reduce her "intrusion," negative punishment and limit setting were done with the help of "time-bound" and "person-bound" techniques. Under the "time-bound" technique, she was assigned a fixed time (40 minutes) to meet the treating team each day. She was told she would get an additional five minutes (reinforcement) with the treating team if she adhered to the scheduled meeting times (i.e., 40 + 5 = 45 minutes). However, five minutes would be taken away from her sessions (negative punishment) if she did not (i.e., 40–5 = 35 minutes). Initially, it was difficult for her to adhere to the prescribed timings. As a result, she would successively lose the entire time assigned to her. Subsequently, it was noticed that she would stick to the session's prescribed timings and not disturb others. With this approach, we were able to reduce her intrusiveness.

Further, an activity schedule was planned to increase her productivity, and positive reinforcement was used. To reinforce her productive engagement, an additional person from the treating team was assigned to talk with her for 40 minutes daily. Under the "person-bound" technique, she was told to talk only to the assigned person and not everyone. She would typically express her worries to everyone, including the attendant, security officer, caregivers of fellow patients, and visitors. It was reiterated that negative punishment would be applied if she talked about her concerns to anyone other than the one assigned. Her excessive use of the phone was another behavioral concern. To lessen this, the caregivers were psycho-educated on how to set boundaries with her by establishing the frequency and length of calls and adhering to them.

Moreover, if she did not comply with the instructions, it would be followed by reducing the time allotted for phone calls (negative punishment). At first, when the caregivers did not answer her calls other than the prefixed ones, she would call them from the phones of fellow patients, their caregivers, and the staff. The treating team identified these behaviors with the help of the caregivers, and the decided-upon negative punishment was implemented. She refused to participate in any household chores during her initial home paroles and would only discuss her job and marriage. A written contingency contract was developed between the therapist and the patient to target the behavior. Per this contract, her desired behavior was contingent on her home parole: if she continued the problem behavior at home, her subsequent parole would be reduced or canceled. With this approach, we could also improve her functionality at home.

The Caregiver Session

Here, we focused on the following areas: highly expressed emotion and effective coping. The patient's brother was the caregiver emotionally invested in her. He would, therefore, readily comply with all her requests. The family was psycho-educated about how their over-engagement hinders her recovery. The brother could not spend meaningful time with his wife and children because he was too preoccupied with worrying about the patient's future. The stress on the caregivers was also exacerbated, further altering family dynamics. The brother was advised to reappraise the situation, determine priorities, and take corrective steps. He was psycho-educated on "me-time" and "family time." The emphasis was on interpersonal relationships, the limit to yielding to the patient's demands (especially during home paroles), and healthy communication patterns. Their myths and misconceptions about exorcism, superstition, and marriage-related ideas were also addressed and clarified.

The postassessment revealed large improvements in the intensity, frequency, and duration of the problem behaviors (**Table 1**).

Discussion

Ms. AK was managed with BM for one year, during which time her excessive behavior improved. BM has been proven useful in a variety of psychiatric phenotypes, including schizophrenia,[10–14] as was also seen in our instance. In mental illnesses, reinforcement and behavioral change have an established functional link.[15] The current instance exemplifies the use of BM for problematic behavior in a person with SMI in an institutional setting. Since high-preference activities frequently serve as excellent secondary reinforcers,[9] we implemented a similar principle. The reinforcement (talking to someone) was made contingent upon the desired behavior (productive engagement and nonintrusiveness) via limit setting (person-bound and time-bound).

As we introduced her to different vocational sections, we found keeping her focused on certain activities challenging. In the initial trials, her quality of work could have been better; she needed to follow the instructions properly and was damaging the equipment. Finally, after completing all relevant trials from the vocational section, she was appointed office attendant. The objective was to

teach her to follow the instructions properly and complete simple tasks. She was expected to arrange the files, take them to their respective areas, and bring them back after completing the task.

In contrast to the earlier vocational trials, she adjusted successfully, with little difficulty, after a few days of the trial. Nevertheless, the major challenge was a job with no salary. Since she had nothing to gain financially, her irritation and intrusiveness reappeared. Therefore, she was attached to an NGO that collaborated with the treating institute. She began receiving remunerations from the NGO for her work. After that, the treating team was able to sustain her improvement.

Additionally, when asked to set her priorities, she listed her career first and her marriage second. Therefore, the focus of management was her vocational training. She agreed to that and seemed less stressed after that. She raised the problem of her PCOD and weight as a marital concern. This shifted her attention to improving her general physical health and management of PCOD before pursuing marriage proposals. Throughout BM, the caregiver sessions were continued. Caregivers could recognize the nature of her issue and successfully manage her at home using the same behavioral strategy. She started participating in household activities, and during each successive parole, taking her to home paroles was easier for the caregivers.

This article highlights the effectiveness of BM, not limited to the token economy, in persons with SMI. Numerous unrecognized behavioral problems could obstruct rehabilitation and hurt long-term prognosis. This article's limitation is the absence of behavioral checklists for charting behavioral impairments. However, the direct observation method was employed as a mode of assessment to preserve the naturalistic design and supportive pragmatic context.

Conclusion

In a rehabilitation setup, it is necessary to structure the inpatient infrastructure to mirror the real-world scenario where the patients can practice their behaviors in an environment that approximates the community. BM is an evidence-based practice with notable clinical successes in treating various behavioral issues in persons with SMI. This article highlights that BM in persons with SMI should be individualized. Integrating BM in persons with SMI can be effective in psychosocial rehabilitation, as exemplified by the discussed instance.

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Informed Consent

Informed consent was obtained from the patient at both point scales. One was taken at the time of the oral presentation and second, for the purpose of this publication. The patient was fully informed about the nature of the report, and the confidentiality has been maintained throughout the process.

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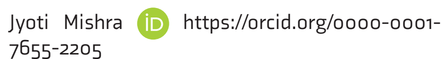
Jyoti Mishra  https://orcid.org/0000-0001-7655-2205

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