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Research Article

Exploring the Role of Occupational Therapy in Supporting Individuals with Bipolar Disorder a Cross Sectional Study

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Abstract

Bipolar disorder (BD) is a chronic and severe mood disorder characterized by recurrent episodes of mania, hypomania, and depression, often associated with persistent cognitive, behavioral, and functional impairments. These impairments can negatively affect occupational performance, social participation, and overall quality of life, even during periods of mood stability. While pharmacological management remains essential, functional recovery is frequently incomplete without comprehensive psychosocial interventions. Occupational therapy (OT) plays a significant role in addressing functional limitations by promoting engagement in meaningful activities and supporting adaptive behaviors. The aim of this study was to examine behavioral and functional difficulties among individuals with bipolar disorder and to explore the potential contribution of occupational therapy in improving daily functioning.

Method: A quantitative cross-sectional study design was employed. The study was conducted at King Abdulaziz Hospital in Al Ahsa, Saudi Arabia. A convenience sample of individuals diagnosed with bipolar disorder was recruited according to predetermined inclusion criteria. Data were collected using a structured questionnaire and the Functional Assessment Screening Tool (FAST), completed by caregivers or parents to evaluate behavioral patterns, functional performance, and reinforcement factors across various daily contexts. Statistical analysis was performed using IBM SPSS Statistics version 24, including descriptive statistics to summarize demographic characteristics and functional outcomes.

Results: The results revealed a high prevalence of behavioral and functional difficulties among participants. Commonly reported issues included emotional dysregulation, sleep disturbances, anxiety, depressive symptoms, and reduced participation in self-care, academic, occupational, and social activities. FAST findings indicated that many behaviors were maintained by both social and nonsocial reinforcement, suggesting difficulties related to attention-seeking, task avoidance, and environmental sensitivity.

Conclusion: The findings demonstrate that bipolar disorder has a substantial impact on functional and behavioral performance. The study underscores the importance of occupational therapy interventions in addressing functional impairments through structured routines, behavioral strategies, cognitive support, and environmental modifications. Integrating occupational therapy within multidisciplinary mental health services may enhance functional recovery and improve participation and quality of life for individuals with bipolar disorder.

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1. Introduction

Bipolar disorder (BD) and schizophrenia are severe and chronic mental illnesses that typically emerge in early adulthood due to a complex interplay of genetic, biological, and environmental factors [1, 2]. BD is characterized by recurrent episodes of mania, hypomania, and depression, leading to significant mood instability, impaired emotional regulation, and functional deficits [3]. Schizophrenia, on the other hand, presents with symptoms such as hallucinations, delusions, and cognitive impairments, resulting in substantial psychosocial dysfunction [4].

One of the major concerns in BD is the persistent cognitive and functional impairment that persists even during remission. Cognitive reappraisal, a process through which individuals regulate negative emotions, is impaired in BD due to dysfunctional prefrontal cortex (PFC) activity, which normally inhibits amygdala hyperactivity [5]. These neurobiological deficits contribute to emotional dysregulation, affecting social, occupational, and daily life functioning [6].

Despite advancements in pharmacological and psychosocial treatments, individuals with BD continue to experience significant disability. Antidepressants have shown limited efficacy in treating depressive episodes in BD and are typically recommended as adjunctive therapy with mood stabilizers [7]. Moreover, lingering cognitive dysfunction and residual affective symptoms hinder full functional recovery even when patients are clinically stable [8]. Studies suggest that persistent cognitive deficits, including difficulties in planning, problem-solving, and memory, significantly contribute to work impairment and social dysfunction [9].

Given the high suicide risk associated with BD and its chronicity, early intervention, prevention, and rehabilitation strategies are crucial in managing the disorder [10]. Prompt treatment with evidence-based pharmacological and psychosocial therapies can help prevent relapses and improve long-term outcomes [11]. Research highlights that factor such as episode frequency, suicide attempts, hospitalizations, rapid cycling, substance abuse, and social support influence the degree of functional impairment in BD [12]. Understanding these variables can inform tailored interventions to enhance functional recovery and quality of life for BD patients [13].

2. Methods

2.1. Study Design

This research will adopt a cross-sectional survey design as a quantitative approach to assess cognitive and functional challenges in individuals with bipolar disorder. The study will involve descriptive analysis based on responses collected through questionnaires completed by the children's parents. This method allows for observing and documenting behavior patterns at a single point in time. Appropriate statistical tools will be used for data analysis.

2.2. Study Area/Setting

Al ahsa King Abdulaziz Hospital, Saudi Arabia.

2.3. Study Subjects

Inclusion and Exclusion Criteria

Participants included in the study were male and female individuals diagnosed with bipolar disorder, aged below 70 years. Individuals younger than 10 years of age were excluded from the study.

2.4. Sample Size and Sampling Technique

A purposive sampling technique was employed in this study. The target population consisted of approximately 2,000 individuals in the Al Ahsa region who met the inclusion criteria. Sample size estimation was performed using the Raosoft sample size calculator. Based on a 95% confidence level and a 5% margin of error, the recommended sample size for this population was calculated to be 323 participants. Accordingly, a total of 323 eligible individuals were included in the study.

2.5. Data Collection Methods and Instruments

The study employs the Functioning Assessment Short Test (FAST) to measure occupational, social, and cognitive functioning in patients with Bipolar Disorder. The FAST tool, originally developed and validated by Rosa et al. (2007), has been adapted for this study to ensure cultural and linguistic relevance for the target population. The adaptation process involved translation, back-translation, and pilot testing to maintain the tool's reliability and validity in the local context. Despite these modifications, the FAST retains its core components and psychometric strengths, as supported by previous international validation studies.

Participants will complete the Functioning Assessment Short Test (FAST) through face-to-face interviews conducted by trained research staff. This interview-administered approach ensures that participants clearly understand each question and allows researchers to assist with any clarifications, which is especially important given potential cognitive impairments in Bipolar Disorder. Responses will be recorded by the interviewer to maintain accuracy and consistency.

The data collection tool, including the adapted version of the Functioning Assessment Short Test (FAST), will be attached to the study application for review and approval.

Prior to use in the main study, the adapted tool will undergo a pilot testing phase on a small subset of participant's representative of the target population. This process will assess the tool's validity and reliability, ensuring that it accurately measures functional outcomes and yields consistent results. Statistical analysis, including measures such as Cronbach's alpha for internal consistency and test-retest reliability,

will be performed in consultation with a biostatistician. Based on the pilot findings, any necessary modifications will be made to optimize the tool's performance before it is administered to the full study sample.

2.6. Statistical Analysis

Descriptive analyses will conduct in IBM SPSS Statistics for Windows (version 24.0, Armonk, NY). Statically analyses included a summary of participant characteristics. Interferential statistics is the practice of using sampled data to draw the conclusions or make predictions about a larger sample data population.

2.7. Ethical Considerations

Ethical approval was obtained from the Institutional Review Board (IRB) at the National Guard Health Affairs (NGHA). The study was conducted in accordance with the Declaration of Helsinki. The approval number is NRA25/020/5. Confidentiality was maintained, and all data were anonymized. Informed consent was secured from all participants.

3. Results

The analysis of data collected from 299 participants revealed detailed patterns of behavioral and functional difficulties among individuals with bipolar disorder. Demographic findings showed that the majority of participants were young to middle-aged adults (21–40 years), an age group typically associated with higher occupational, academic, and social demands. This highlights the clinical significance of functional impairment during a highly productive stage of life.

Although only a small proportion of participants explicitly reported behavioral problems, further analysis demonstrated the presence of clinically relevant behavioral patterns, particularly emotional and sleep-related disturbances. Staying up late, anger, anxiety, and depressive symptoms were the most frequently reported behaviors. These findings indicate that subclinical or situational behavioral difficulties may persist even when individuals do not self-identify as having major behavioral problems.

Results from the FAST tool showed that social influences played a major role in the occurrence of behaviors. Most participants exhibited behavioral changes in the presence of others, especially following social interactions such as instructions, reprimands, or restriction of preferred activities. Emotional responses, including crying and yelling, were commonly reported, reflecting persistent emotion regulation difficulties.

Social reinforcement analysis revealed that a large proportion of behaviors occurred when individuals did not receive sufficient attention and were significantly reduced when attention was provided. Behaviors frequently led to interaction from others, suggesting that attention-seeking functions were a key maintaining factor. These findings emphasize the importance of social context in understanding behavioral challenges in bipolar disorder.

Nonsocial (automatic) reinforcement findings further demonstrated that behaviors commonly occurred during task performance, in noisy or crowded environments, and during periods of inactivity. Repetitive and self-stimulatory behaviors were frequently reported, indicating sensory and self-regulation components influencing behavior. Functional difficulties were most evident across self-care, academic, work, and daily activity domains, reflecting widespread occupational performance limitations.

Overall, the results indicate that behavioral and functional difficulties in individuals with bipolar disorder are influenced by a complex interaction of emotional dysregulation, environmental demands, social reinforcement, and sensory factors.

Tables and figures

Table 1: Caption is missing

Variable	Category	Frequency (%)
Age	More than 60	13 (4.3%)
	41–60	73 (24.4%)
	21–40	183 (61.2%)
	Less than 20	30 (10%)
Gender	Female	94 (31.4%)
	Male	205 (68.6%)
Academic Qualification	University Level	223 (74.6%)
	High School	59 (19.7%)
	Middle School	17 (5.7%)
Behavioral Problems (General)	No	22 (7.4%)
	Yes	277 (92.6%)
Behavior Problem Types	Other	8 (2.7%)
	Fear	36 (12%)
	Depression	41 (13.7%)
	Anxiety	68 (22.7%)
	Anger	81 (27.2%)
	Staying up late	65 (21.7%)

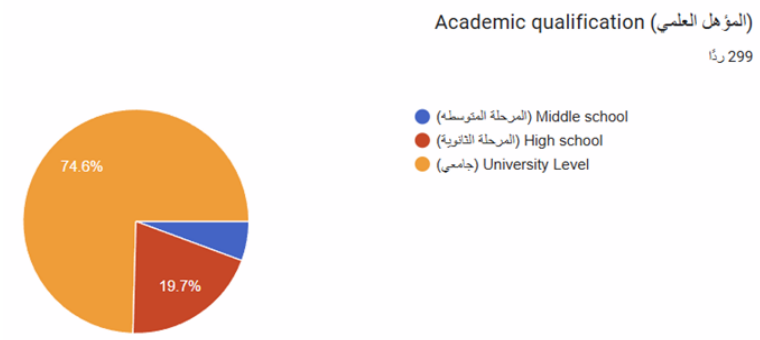

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Table 2: Social Influences on Behavior

Item	Other	No	Yes
The behavior usually occurs in your presence or others' presence	7 (2.0%)	47 (12.1%)	334 (85.9%)
The behavior occurs after interaction (e.g., instruction, reprimand, removing item, etc.)	0	83 (21.3%)	306 (78.7%)
The behavior includes emotional responses (e.g., crying, yelling)	0	78 (20.1%)	311 (79.9%)

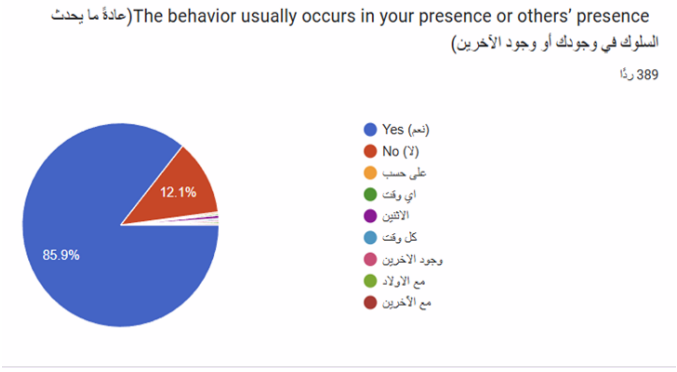

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Table 3: Social Reinforcement

Item	No	Yes
Behavior happens when not receiving much attention	102 (26.2%)	287 (73.8%)
Behavior prompts others to interact (e.g., comfort, reprimand)	99 (25.4%)	290 (74.6%)
Other attention-seeking behaviors also present	111 (28.5%)	278 (71.5%)
Person frequently initiates social interaction	101 (26.0%)	288 (74.0%)
Behavior rarely happens when given attention	95 (24.4%)	294 (75.6%)
Behavior occurs when item is taken or activity ends	109 (28.0%)	280 (72.0%)
Behavior occurs when told "no" to item/activity	107 (27.5%)	282 (72.5%)
You respond by giving a specific item (toy, food, etc.)	108 (27.8%)	281 (72.2%)
Other similar behaviors also lead to access	112 (28.8%)	277 (71.2%)
Behavior rarely occurs during tasks	122 (31.4%)	267 (68.6%)

Table 4: Activities Associated with Behavior

Category	Frequency (%)
Other	69 (17.7%)
Work	109 (28.0%)
Academic	97 (24.9%)
Self-care	114 (29.3%)

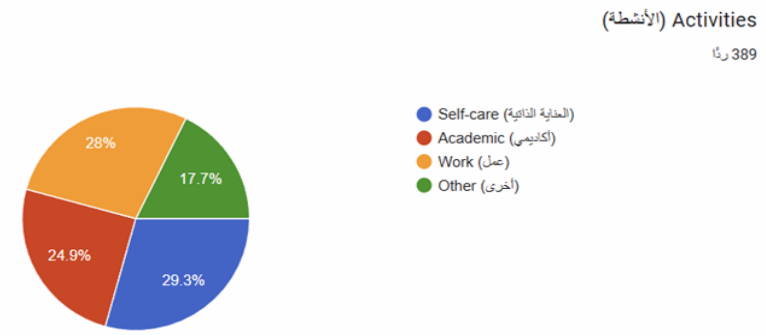

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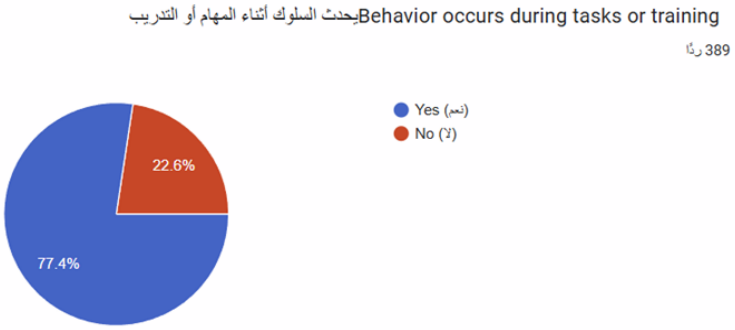
Table 5: Nonsocial (Automatic) Reinforcement

Item	No	Yes
Behavior occurs during tasks or training	88 (22.6%)	301 (77.4%)
Person is noncompliant during tasks	148 (38.0%)	241 (62.0%)
Behavior occurs in noisy/crowded areas	110 (28.3%)	279 (71.7%)
You respond by giving a short break	90 (23.1%)	299 (76.9%)
Behavior rarely occurs with no demands or when left alone	96 (24.7%)	293 (75.3%)
Behavior occurs when alone or unoccupied	112 (28.8%)	227 (71.2%)
Behavior occurs regardless of the environment	113 (29.0%)	276 (71.0%)
Person has few reinforces or plays inappropriately	96 (24.7%)	293 (75.3%)
Person is unresponsive to social stimuli	106 (27.2%)	283 (72.8%)
Engages in repetitive behaviors (e.g., rocking, mouthing)	124 (31.9%)	265 (68.1%)
Behavior is ignored or not responded to	126 (32.4%)	263 (67.6%)
Behavior happens in cycles (frequent, then rare)	118 (30.3%)	271 (69.7%)
Behavior increases when the person is ill	126 (32.4%)	263 (67.6%)
History of recurrent illness (e.g., infections, allergies)	145 (37.3%)	244 (62.7%)



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4. Discussion

The present study examined behavioral and functional difficulties associated with bipolar disorder (BD), with particular emphasis on the influence of social and nonsocial reinforcement factors and their implications for occupational performance. The findings contribute to existing literature by clarifying how environmental, interpersonal, and sensory variables interact with emotional dysregulation to affect daily functioning.

4.1. Interpretation of Findings

The results indicate that although the overall prevalence of reported behavioral problems was relatively low, the types of behaviors identified—such as sleep disturbance, anger, anxiety, and depressive manifestations—are clinically significant and closely associated with impaired occupational and social functioning in individuals with BD. These findings support evidence that functional impairment in BD is not solely dependent on symptom severity but is also influenced by contextual and behavioral factors.

A substantial proportion of participants reported that problematic behaviors occurred in social contexts, particularly in the presence of others and following interpersonal interactions such as instructions or reprimands. This pattern suggests that social demands and interactional stressors may precipitate or exacerbate maladaptive behaviors. Furthermore, the frequent presence of emotional responses indicates persistent difficulties in emotion regulation, a core feature of BD that has been linked to functional impairment even during euthymic phases.

Social reinforcement emerged as a prominent maintaining factor for behavior. The increased occurrence of behavioral issues in conditions of limited attention, and their reduction when adequate attention was provided, suggests that certain behaviors may serve an instrumental function in eliciting social interaction. This finding highlight the importance of considering behavioral function when addressing occupational and social difficulties, rather than attributing such behaviors solely to mood instability. In addition, nonsocial (automatic) reinforcement factors were commonly reported. Behaviors were more frequent during task engagement, in overstimulating environments, and during periods of limited structure or engagement. The presence of repetitive or self-stimulatory behaviors further suggests an underlying sensory or self-regulatory component. These findings underscore the role of environmental demands and sensory processing in shaping functional performance in individuals with BD.

4.2. Strengths and Limitations

A key strength of this study is its relatively large sample size, which enhances the robustness of the descriptive findings. The use of the Functional Assessment Screening Tool (FAST) provided a structured framework for identifying behavioral functions across social and nonsocial domains, offering clinically relevant insights from an occupational therapy perspective.

Nevertheless, several limitations must be acknowledged. The cross-sectional design precludes causal inference regarding the relationship between behavioral patterns and functional impairment. Data collection relied on caregiver or informant reports, which may be subject to reporting bias and variability in observation. Additionally, the absence of direct neurocognitive or symptom severity assessments limits the ability to directly link behavioral findings with cognitive dysfunction or clinical phase of BD.

4.3. Comparison with Previous Literature

The current findings are consistent with previous research demonstrating that individuals with BD experience persistent functional impairments despite symptomatic improvement. Prior studies have identified emotional dysregulation and executive dysfunction as key contributors to occupational and social difficulties. The observed influence of social interaction and attention on behavior aligns with existing psychosocial models emphasizing the role of environmental contingencies in maintaining maladaptive behaviors Moreover, the prominence of nonsocial reinforcement factors supports earlier evidence that sensory overstimulation, cognitive load, and environmental demands contribute to functional challenges in psychiatric populations. Similar to previous reports, the findings reinforce the notion that pharmacological treatment alone is insufficient to address functional impairment, highlighting the need for integrative psychosocial and rehabilitative approaches.

4.4. Implications and Recommendations for Practice

The findings of this study have important implications for occupational therapy and multidisciplinary practice. Interventions should prioritize environmental modification, task simplification, and sensory regulation strategies to reduce behavioral dysregulation during daily activities. Occupational therapists should incorporate behavioral analysis to identify the functional purpose of behaviors and tailor interventions accordingly.

Furthermore, caregiver and family education is essential to address attention-related behavioral patterns and to promote consistent and supportive interaction strategies. Early, occupation-based interventions that integrate cognitive rehabilitation and psychosocial support may contribute to improved functional outcomes and reduced long-term disability in individuals with BD.

Future research should employ longitudinal designs and include objective cognitive and clinical measures to further elucidate the mechanisms underlying functional impairment and to evaluate the long-term effectiveness of occupational therapy interventions.

5. Conclusion

This study demonstrates that bipolar disorder has a considerable impact on behavioral regulation and functional performance across daily life activities. The findings indicate that functional difficulties are not solely related to mood symptoms, but are also influenced by social interactions, environmental demands, and sensory factors. Both social and non-social reinforcement were found to play important roles in maintaining behavioural challenges.

The results emphasize the value of occupational therapy in addressing functional impairments through structured routines, environmental modification, behavioral strategies, and sensory regulation. Integrating occupational therapy within multidisciplinary mental health services may enhance functional recovery and improve participation and quality of life for individuals with bipolar disorder. Future research using longitudinal designs is recommended to further evaluate the long-term effectiveness of occupational therapy interventions. Compliance with ethical standards.

Article Information

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Statement of ethical approval: Ethical approval for this study was obtained from the Institutional Review Board (IRB) of National Guard Health Affairs (Approval No.: NRA25/020/5). The study was conducted in accordance with the principles of the Declaration of Helsinki and involved human participants.

Statement of informed consent: Informed consent was obtained from all participants prior to their inclusion in the study.

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Author's Contributions: Conceptualization, Writing – review and editing : Paramasivan; Methodology: Meshal AlAnazi; Data Curation: Elyas Basim Alghurayri, Ali Mohamad Alhafith, Abdulaziz Zakaria Almasbah, and Ahmed Abdulrauf Alessa; Formal Analysis: Elyas Basim Alghurayri, Ali Mohamad Alhafith, Abdulaziz Zakaria Almasbah, and Ahmed Abdulrauf Alessa.

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