

Occupational Functioning Rating Scale: Development and Validation

T. Jegadeesan¹, R. Renuchitra²

¹Principal, College of Occupational Therapy, JKK Munirajah Medical Research Foundation, B. Komarapalayam, Affiliated to The Tamilnadu Dr. MGR Medical University, Chennai, Tamilnadu, India

²Vice Principal & Professor, College of Occupational Therapy, JKK Munirajah Medical Research Foundation, B. Komarapalayam, Affiliated to The Tamilnadu Dr. MGR Medical University, Chennai, Tamilnadu, India

Abstract: ***Background:** Occupational functioning encompasses an individual's ability to effectively perform and participate in meaningful daily activities, including self-care, productivity, and social engagement. Among individuals with mental illness, impairments in occupational functioning are common and can significantly hinder recovery and quality of life. However, there is a dearth of standardized, culturally appropriate assessment tools for evaluating occupational functioning within Indian psychiatric settings. **Objective:** This study aimed to develop and validate the Occupational Functioning Rating Scale (OFRS), a comprehensive tool tailored to assess occupational functioning in individuals with mental illness in the Indian context. **Methods:** A two-phase, mixed-methods design was adopted. In Phase 1, focus group discussions with mental health professionals and caregivers led to the generation of 43 preliminary items, reflecting key domains of occupational functioning. Phase 2 involved content validation by expert occupational therapists and psychometric testing with a clinical sample (N=25). Internal consistency was assessed using Cronbach's alpha, and construct validity was examined through Principal Component Analysis (PCA). **Results:** The OFRS demonstrated excellent internal consistency (Cronbach's $\alpha = 0.90$). Corrected item-total correlations for most items exceeded the 0.30 threshold, indicating strong item reliability. PCA revealed a 13-factor solution explaining 90.18% of the total variance, supporting the multidimensional nature of occupational functioning. No item deletion significantly improved reliability, supporting the retention of all items. **Conclusion:** The Occupational Functioning Rating Scale (OFRS) is a psychometrically sound and clinically relevant tool for assessing occupational functioning in individuals with mental illness. Its culturally grounded development and robust reliability make it a valuable resource for clinicians and researchers in Indian mental health and occupational therapy practice.*

Keywords: Occupational functioning, mental illness, psychometric validation, occupational therapy, functional assessment, psychiatric rehabilitation.

1. Introduction

Occupational functioning represents an individual's capacity to participate effectively in activities that hold personal significance, including self-care, vocational pursuits, leisure activities, and social engagement (Pan et al., 2020). It extends beyond the mere execution of tasks, encompassing role fulfillment, productivity, and a sense of satisfaction derived from daily life experiences (Navarro et al., 2013). Occupational functioning serves as a crucial determinant of an individual's overall health and well-being, playing a pivotal role in shaping their identity, bolstering self-efficacy, and fostering social inclusion (Hillman & Chapparo, 1995). Impairments in occupational functioning can have profound consequences, often leading to a diminished quality of life, social isolation, economic dependence, and psychological distress (Harvey, 2013).

Occupational functioning is intricately linked to an individual's ability to engage in work or other meaningful daily activities, encompassing not only the performance of tasks but also active participation in various roles, social interactions, and overall productivity. It stands as a critical aspect of health and well-being, exerting a substantial influence on an individual's quality of life, economic independence, and the outcomes of recovery processes, especially among individuals grappling with mental health conditions. Occupational functioning spans a wide array of domains, including employment, activities of daily living, and social roles, and is closely intertwined with an

individual's overall functioning and their ability to participate fully in society (Sumiyoshi et al., 2015).

Occupational functioning is considered a key determinant of health and well-being; it is central to identity, self-efficacy, and social inclusion (Wilcock & Hocking, 2015). Impairments in occupational functioning often lead to reduced quality of life, social isolation, economic dependence, and psychological distress. Occupational functioning is influenced by a complex interplay of personal, environmental, and health-related factors.

Mental illnesses such as schizophrenia, bipolar disorder, and major depressive disorder are strongly associated with functional impairments in work, self-care, and social roles (Eack et al., 2019). Symptoms such as cognitive deficits, emotional dysregulation, and lack of motivation negatively impact task performance and work productivity. Environmental barriers, including stigma, limited workplace accommodations, and lack of community support, further exacerbate occupational dysfunction.

For individuals with mental illness, occupational impairment is a major source of disability, symptoms like poor concentration, social withdrawal, or reduced motivation often translate into reduced productivity, higher absenteeism, and impaired life roles. Literature emphasizes that psychiatric conditions frequently disrupt occupational functioning more than they predict symptom severity, underscoring the importance of evaluating functioning independently from symptom measures.

Volume 14 Issue 8, August 2025

Fully Refereed | Open Access | Double Blind Peer Reviewed Journal

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Multiple factors influence occupational functioning among individuals with mental health conditions such as Cognitive deficits, mood dysregulation, and motivational issues can impair task execution and job performance. Social and environmental factors, including stigma, workplace accommodations, and family support, significantly impact occupational engagement.

Despite its importance, occupational functioning is often under-assessed in psychiatric research and practice tools like the Global Assessment of Functioning (GAF) offer only broad, clinician-rated impressions and were removed or deemphasized in DSM-5 in favor of newer tools such as WHODAS. The Occupational Functioning Scale developed for depressive and anxiety disorders, showed excellent inter-rater reliability (ICC ≈ 0.91) and reasonable criterion validity, but remains limited in scope and use.

Moreover, recent reviews of work functioning measurement highlight a fragmented landscape on assessing occupational functioning specifically in mentally ill populations. In regular occupational therapy practice there is a clear need for a practically oriented, reliable, and valid instrument to assess occupational functioning among psychiatric populations. Developing and validating such a scale addresses this gap by providing a robust tool to assess occupational functioning among mentally ill patients, thereby improving measurement of functional outcomes, informing interventions, and guiding policy and clinical decision-making.

Moreover, Occupational therapists (OTs) play a critical role in assessing and improving occupational functioning. Using a holistic, client-centered approach, OTs evaluate an individual's capacity to perform daily activities, identify barriers, and implement interventions to restore, maintain, or adapt occupational performance (American Occupational Therapy Association, 2020). In mental health, OTs focus on enhancing life skills, work readiness, social participation, and role competence through evidence-based interventions such as activity analysis, work simulation, and environmental modifications. Thus, accurate assessment of occupational functioning is crucial for treatment planning, monitoring progress, and evaluating intervention outcomes in occupational therapy practice.

In Indian occupational therapy settings, clinicians often rely on informal clinical observations, unstructured interviews, or Western tools that have not been culturally adapted or psychometrically validated for the Indian population. The lack of standardized instruments tailored to Indian socio-cultural and occupational contexts limits evidence-based practice, hinders accurate documentation of functional

outcomes, and restricts research in occupational functioning among mentally ill individuals.

Given the functional impairments caused by mental illnesses and their profound impact on recovery, there is a critical need to develop and validate culturally relevant, psychometrically sound, and occupation-focused assessment tools in India. A standardized tool would enable occupational therapists and mental health professionals to Objectively assess functional deficits across work, self-care, and social domains, Monitor intervention outcomes and guide individualized therapy, Support research and policy-making by providing quantifiable evidence of functional disability, and Promote early vocational rehabilitation and community reintegration.

The development of the Occupational Functioning Rating Scale (OFRS) aims to address this gap by providing a standardized, reliable, and valid measure specifically designed to assess occupational functioning among mentally ill patients in the Indian context.

2. Methodology

The development of the Occupational Functioning Rating Scale (OFRS) followed a structured, qualitative-quantitative approach to ensure content relevance and clinical utility. The process was carried out in Two key phases:

1) Preliminary Item Generation

The initial phase involved conducting focus group discussions (FGDs) with key stakeholders in the field of mental health care. These groups included experienced mental health occupational therapists, social workers, and caretakers of individuals with mental illness. The aim of these discussions was to gather rich, practice-based insights into the functional challenges commonly observed in individuals with mental health conditions. Data from these FGDs were thematically analyzed, resulting in the generation of an initial pool of 43 statements that reflected various domains of occupational functioning.

2) Content Validation

To assess the content validity of the preliminary items, the 43 statements were presented to a panel of 10 senior occupational therapists with extensive experience in mental health rehabilitation. Each expert independently evaluated the relevance, clarity, and representativeness of the items using a structured content validation form. Based on their feedback, items were refined to enhance precision and remove redundancy. The content validity index (CVI) was calculated for each item to identify the most representative and clinically relevant statements.

Occupational Functioning Rating Scale:

S. No.	Statements	1	2	3	4	5
1	Goes to an assigned area without reminder in a routine daily programme					
2	Understand and completes a task					
3	Travels independently					
4	Wears proper dress					
5	Takes care of toilet needs					
6	Follows meal time manners					
7	Comes to work daily					
8	Reaches work place on time					

Volume 14 Issue 8, August 2025

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9	Follows job site rules					
10	Keeps working until end of the day					
11	Follows the departure routines					
12	Utilizes the break time appropriately					
13	Comes back to work place after break					
14	Takes care of personal belongings					
15	Respect others belongings					
16	Respect superiors					
17	Cooperates with co-workers					
18	Follows instructions					
19	Avoid unnecessary talking					
20	Uses telephone or mobile when necessary					
21	Ask relevant questions					
22	Work as a team without being disruptive					
23	Joins social activities in the workplace					
24	Accepts corrections					
25	Avoid quarrels					
26	Respect help if necessary					
27	Control emotions					
28	Attend to an assigned task without disrupting others for 1 hour					
29	Perform household tasks					
30	Maintains appropriate sex behavior					
31	Uses tools safely					
32	Leaves tools and products in place					
33	Keeps work area clean					
34	Reports missing or broken items					
35	Work satisfactorily					
36	Shows sustained improvement in quality of work					
37	Difficulty in falling asleep					
38	Sleepiness interferes with daily routine					
39	Awakes in the morning and feeling tired					
40	Troubles staying asleep					
41	Entertains with activities					
42	Enjoying the activity was entertaining					
43	Communicates needs					

The Occupational Functioning Rating Scale (OFRS), consisting of 43 items, demonstrated excellent internal consistency. Cronbach's alpha was **0.90**, indicating a high degree of inter-item reliability. The corrected item-total correlations ranged from **0.045 to 0.700**, with most items exceeding the recommended threshold of **0.30**, suggesting that the majority of items contributed adequately to the overall construct. Only a few items (Q1, Q13, Q19, Q30, Q41, Q43) had low item-total correlations (<0.30), but the Cronbach's alpha did not significantly improve if any item was deleted, justifying the retention of all items.

A Principal Component Analysis with varimax rotation was conducted to explore the underlying factor structure. Eigenvalues greater than 1 suggested a 13-factor solution, which explained 90.18% of the total variance. The first five components accounted for 58.87% of the variance, with the first factor alone explaining 22.04%, suggesting a dominant underlying construct. Communalities after extraction ranged from 0.71 to 0.98, indicating that the items shared substantial variance with the retained components.

Item-total statistics indicated that, Items with corrected item-total correlations above 0.40 (e.g., Q2, Q5, Q7, Q11, Q15, Q16, Q25, Q32, Q33, Q35, Q40) contributed most strongly to the internal consistency. No single item deletion would substantially increase Cronbach's alpha, supporting the scale's structural integrity.

Scoring Method:

Score	Description
1	Never/Unable to perform
2	Rarely performs with frequent assistance
3	Sometimes performs with occasional prompts
4	Often performs independently
5	Always performs independently and consistently

Interpretation of Total Score (suggested cutoff ranges):

Score Range	Occupational Functioning Level
43–85	Severe dysfunction
86–129	Moderate dysfunction
130–172	Mild dysfunction
173–199	Near-normal functioning
200–215	High occupational functioning

3. Data Analysis and results

The OFRS demonstrated excellent internal consistency with a Cronbach's alpha of 0.90 for the entire 43-item scale. Corrected item-total correlations ranged from 0.045 to 0.700, with the majority of items exceeding the 0.30 threshold, indicating good homogeneity of items (Table 1). The deletion of any single item did not improve Cronbach's alpha substantially, suggesting that all items contributed meaningfully to the overall scale.

Table 1: Corrected Item-Total Correlations and Internal Consistency Analysis for the Occupational Functioning Rating Scale (OFRS)

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	0.045	0.902
Q2	0.657	0.896
Q3	0.362	0.899
Q4	0.270	0.900
Q5	0.502	0.897
Q6	0.475	0.897
Q7	0.700	0.894
Q8	0.508	0.897
Q9	0.376	0.899
Q10	0.320	0.899
Q11	0.554	0.896
Q12	0.277	0.900
Q13	0.184	0.901
Q14	0.410	0.898
Q15	0.581	0.895
Q16	0.611	0.895
Q17	0.279	0.900
Q18	0.321	0.899
Q19	0.085	0.903
Q20	0.242	0.900
Q21	0.348	0.899
Q22	0.284	0.900
Q23	0.427	0.898
Q24	0.417	0.898
Q25	0.496	0.897
Q26	0.465	0.897
Q27	0.447	0.898
Q28	0.422	0.898
Q29	0.474	0.897
Q30	0.192	0.900
Q31	0.350	0.899
Q32	0.570	0.896
Q33	0.545	0.897
Q34	0.508	0.898
Q35	0.541	0.896
Q36	0.486	0.897
Q37	0.338	0.899
Q38	0.433	0.898

Q39	0.403	0.898
Q40	0.510	0.896
Q41	0.236	0.901
Q42	0.357	0.899
Q43	0.225	0.900

Construct Validity

The PCA revealed a 13-factor solution based on the Kaiser criterion (eigenvalues >1), explaining 90.18% of the total variance. The first five factors cumulatively accounted for 58.87% of the variance, with the first factor alone contributing 22.04%, suggesting a strong general factor underlying occupational functioning (Table 2). Communalities after extraction ranged from 0.71 to 0.98, indicating that most items shared substantial variance with their respective components.

Table 2: Explained Variance and Eigenvalues from Principal Component Analysis (PCA) for the OFRS (N=25)

Component	Eigenvalue	% of Variance	Cumulative %
1	9.478	22.04%	22.04%
2	5.920	13.77%	35.81%
3	3.631	8.45%	44.25%
4	3.274	7.61%	51.87%
5	3.012	7.00%	58.87%
6	2.401	5.58%	64.45%
7	2.255	5.25%	69.70%
8	1.999	4.65%	74.35%
9	1.810	4.21%	78.56%
10	1.550	3.61%	82.16%
11	1.234	2.87%	85.03%
12	1.159	2.70%	87.73%
13	1.054	2.45%	90.18%

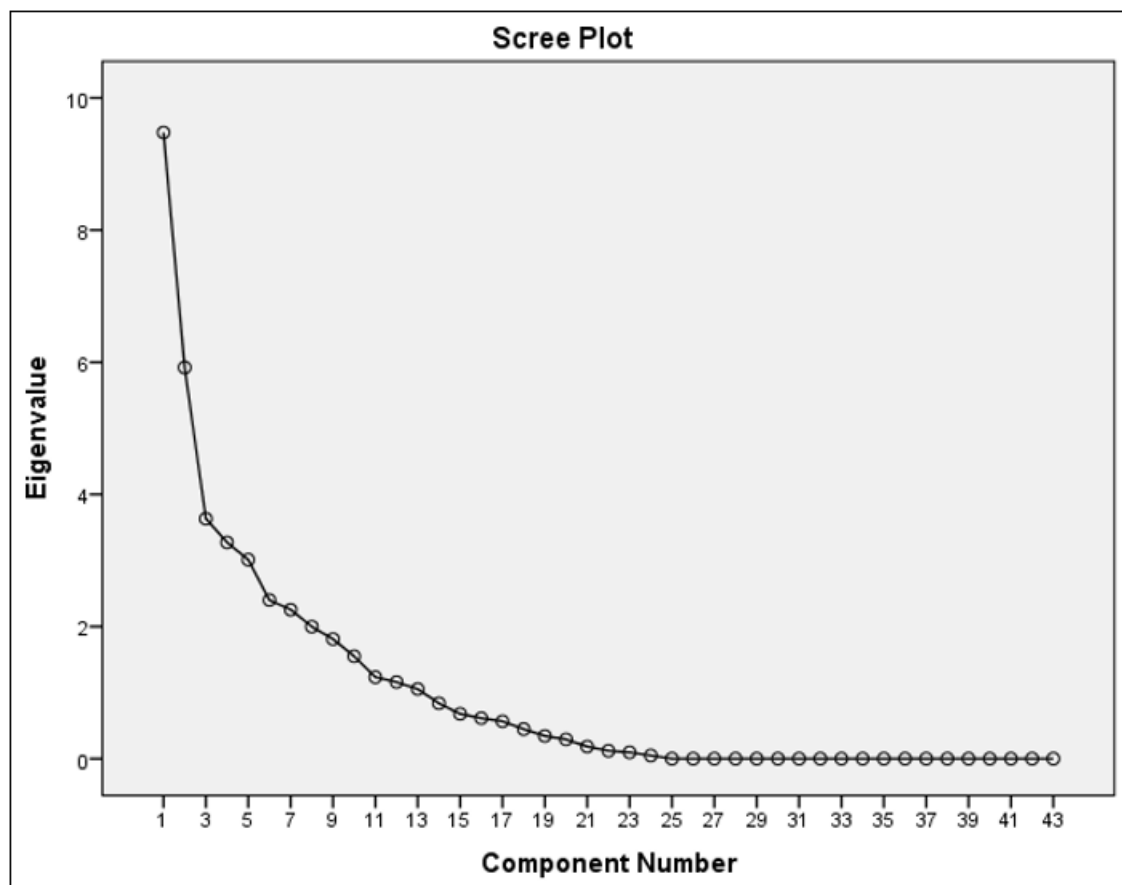
Item Performance

Items with the highest corrected item-total correlations (≥ 0.50) included Q2, Q5, Q7, Q11, Q15, Q16, Q25, Q32, Q33, Q35, and Q40. A few items (Q1, Q13, Q19, Q30, Q41, Q43) had relatively low correlations (< 0.30); however, their removal did not improve reliability significantly.

Table 3: Scale-Level Descriptive Statistics and Internal Consistency Indicators for Each OFRS Item

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	122.64	496.573	.045	.902
Q2	122.92	475.993	.657	.896
Q3	123.12	480.943	.362	.899
Q4	123.28	482.127	.270	.900
Q5	122.72	475.793	.502	.897
Q6	123.56	469.090	.475	.897
Q7	123.20	463.083	.700	.894
Q8	123.36	470.657	.508	.897
Q9	123.28	475.543	.376	.899
Q10	123.60	480.833	.320	.899
Q11	123.68	463.810	.554	.896
Q12	123.28	485.210	.277	.900
Q13	123.32	489.143	.184	.901
Q14	122.64	483.157	.410	.898
Q15	123.76	459.440	.581	.895
Q16	123.48	465.760	.611	.895
Q17	122.64	486.240	.279	.900
Q18	123.12	481.110	.321	.899
Q19	123.24	493.107	.085	.903
Q20	123.64	484.990	.242	.900

Q21	123.44	475.673	.348	.899
Q22	123.32	484.727	.284	.900
Q23	123.00	479.083	.427	.898
Q24	122.92	478.160	.417	.898
Q25	123.44	470.257	.496	.897
Q26	123.36	470.073	.465	.897
Q27	122.56	485.007	.447	.898
Q28	123.16	474.890	.422	.898
Q29	122.96	475.790	.474	.897
Q30	122.72	491.043	.192	.900
Q31	123.08	478.743	.350	.899
Q32	123.00	467.083	.570	.896
Q33	122.76	479.773	.545	.897
Q34	122.72	482.127	.508	.898
Q35	123.44	464.673	.541	.896
Q36	123.16	474.723	.486	.897
Q37	123.28	479.960	.338	.899
Q38	122.92	469.993	.433	.898
Q39	122.72	477.960	.403	.898
Q40	123.12	465.360	.510	.896
Q41	123.16	484.557	.236	.901
Q42	123.28	483.627	.357	.899
Q43	123.36	486.990	.225	.900



4. Discussion

The development and validation process of the Occupational Functioning Rating Scale (OFRS) has yielded promising psychometric outcomes. The internal consistency of the scale (Cronbach's $\alpha = 0.90$) confirms that the 43 items cohesively assess a unidimensional construct related to occupational functioning. This high level of reliability is consistent with previous efforts to measure occupational or psychosocial functioning in psychiatric populations, such as

the Occupational Functioning Scale (OFS) developed by Hannula et al. (2006).

The Principal Component Analysis (PCA) revealed a 13-factor structure explaining over 90% of the total variance, with the first component accounting for 22.04% alone. This suggests that while occupational functioning may be viewed as a general construct, it comprises multiple interrelated domains. These domains may reflect specific occupational sub-functions such as work readiness, social competence, self-care ability, and adaptive coping skills, which align with

occupational therapy models like the Person-Environment-Occupation (PEO) framework.

Furthermore, item performance analysis highlighted that items such as Q2, Q5, Q7, and Q16 demonstrated high corrected item-total correlations, signifying their strong contribution to the overall construct of occupational functioning. Conversely, a few items (e.g., Q1, Q19, Q43) showed relatively low correlations. Despite this, their retention was justified based on conceptual importance and their contribution to content validity, ensuring that the scale adequately captures the broad spectrum of occupational functioning.

This multidimensionality and the cultural contextualization of the items position the OFRS as a novel and clinically useful tool for Indian mental health settings, where standardized functional assessments are scarce. Unlike generic tools such as the Global Assessment of Functioning (GAF) or even WHODAS 2.0, the OFRS is tailored to the socio-occupational realities of Indian patients and can serve both clinical and research purposes in psychiatric rehabilitation.

5. Recommendations for Future Research

Confirmatory Factor Analysis (CFA) should be conducted in larger and more heterogeneous samples to verify the underlying structure identified by PCA. Convergent and Discriminant Validity studies should be performed by correlating OFRS scores with existing functional assessment scales. Test-retest reliability and inter-rater reliability need to be established to confirm temporal stability and cross-user consistency.

6. Conclusion

The Occupational Functioning Rating Scale offers a reliable and valid metric to assess occupational functioning in individuals with mental illness and fills a critical gap in Indian mental health assessment frameworks. Its adoption in occupational therapy practice can enhance treatment planning, documentation, and research on functional outcomes in psychiatric populations.

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