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Original Research Article

Occupational therapy and rehabilitation: fostering mental resilience and professional re-entry

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ABSTRACT

Background: Occupational therapy (OT) plays a critical role in rehabilitation by addressing both physical and psychological challenges, fostering mental resilience, and supporting professional re-entry for individuals recovering from disabilities or illnesses. This study evaluated the impact of OT on mental resilience and professional re-entry among individuals undergoing rehabilitation at the Centre for the Rehabilitation of the Paralysed (CRP), Savar, Dhaka, Bangladesh.

Methods: A cross-sectional study was conducted from August 2023 to July 2024, involving 150 participants recruited through purposive sampling. Standardized tools were used to assess mental resilience (resilience scale), employment readiness, self-efficacy, and satisfaction with OT services. Data were collected via structured questionnaires, interviews, and therapist records. Descriptive statistics summarized demographic data and therapy outcomes, while chi-square tests, paired t-tests, and logistic regression were used to analyse associations between OT interventions and mental resilience or professional re-entry.

Results: The study observed a significant improvement in mental resilience, with 65% of participants transitioning to moderate or high resilience levels post-therapy. Employment readiness increased by 40%, with 55% successfully re-entering the workforce. Quality of life scores improved in 78% of participants, and 85% expressed satisfaction with OT services. Regression analysis identified mental resilience, self-efficacy, and social support as strong predictors of successful professional re-entry ($p<0.05$).

Conclusions: OT interventions demonstrated a significant positive impact on mental resilience, quality of life, and employment outcomes. However, persistent barriers such as workplace accessibility and psychological challenges were noted. The findings underscore the need for integrated OT approaches to address these barriers and support holistic rehabilitation.

Keywords: Mental resilience, Occupational therapy, Professional re-entry, Quality of life, Rehabilitation

INTRODUCTION

Occupational therapy (OT) is instrumental in enhancing mental resilience and facilitating professional re-entry for individuals facing physical, psychological, or cognitive challenges.[1] By focusing on enabling participation in meaningful activities, OT addresses the multifaceted needs of clients, promoting well-being and functional

independence.[2] Mental resilience- the capacity to adapt positively to adversity- is crucial for individuals recovering from illness or injury. OT interventions have been shown to bolster resilience by emphasizing client-centered approaches that enhance coping strategies and engagement in daily activities.[3] For instance, individualized treatment focusing on problem-solving, social support, and participation in meaningful occupations can significantly improve resilience in individuals with chronic health conditions.[4] Professional re-entry, particularly for those who have experienced trauma or stress-related mental health conditions, presents unique challenges.

OT practitioners employ a range of strategies to support individuals in returning to work, including cognitive work hardening, stress management techniques, and environmental modifications.[5] A scoping review highlighted the effectiveness of occupational therapy interventions in facilitating return to work for persons with trauma and stress-related mental health conditions.[6] Moreover, occupational therapists themselves utilize professional resilience strategies to maintain career longevity and effectiveness in practice.[7] A cross-sectional survey involving therapists identified key strategies such as maintaining a belief in the value of occupational therapy, engaging in reflective practices, and participating in professional support networks.[8]

The concept of "doing, being, becoming, and belonging", central to OT practice, fosters holistic recovery by aligning therapeutic interventions with personal and professional aspirations.[9] This approach is supported by evidence demonstrating its effectiveness in enhancing both mental and occupational outcomes.[10] Additionally, the recovery journey in mental health has been linked to meaningful engagement in occupational roles, underscoring the transformative potential of OT.[11] Mental health service users often highlight the role of occupation in their recovery process, citing its impact on self-esteem and functional improvement.[12] Resilience-building frameworks such as the Kawa model have been adapted in diverse cultural contexts to support mental health recovery and professional reintegration.[13] Furthermore, interventions rooted in community participation and supported housing models have been shown to positively influence occupational outcomes.[14] OT's role in addressing burnout and promoting job satisfaction among mental health practitioners further emphasizes its relevance in fostering professional resilience.[15]

Objectives

General objective

To evaluate the role of occupational therapy (OT) in fostering mental resilience and facilitating professional re-entry for individuals undergoing rehabilitation at the Centre for the Rehabilitation of the Paralysed (CRP), Savar, Dhaka, Bangladesh.

Specific objectives

To assess the impact of OT interventions on mental resilience. To evaluate the effectiveness of OT in facilitating professional re-entry. To explore the relationship between OT and quality of life outcomes. To identify challenges and limitations in the implementation of OT at CRP. To contribute evidence-based insights into OT's role in mental health and occupational rehabilitation in Bangladesh.

METHODS

Study design

This is a cross-sectional study conducted at the Centre for the Rehabilitation of the Paralysed (CRP) in Savar, Dhaka, Bangladesh, over a one-year period from August 2023 to July 2024. The study aims to evaluate the role of occupational therapy in fostering mental resilience and facilitating professional re-entry among individuals undergoing rehabilitation.

Sample size calculation

The sample size was determined using the formula for cross-sectional studies:

$$n = \frac{Z^2 p(1-p)}{d^2}$$

Where:

n = required sample size

Z = Z-value (1.96 for 95% confidence level)

p = estimated proportion of the population with the characteristic of interest (assumed as 0.5 for maximum variability)

d = margin of error (0.08)

Thus, the sample size for this study is 150 participants.

Inclusion criteria

The study included individuals aged 18 years and above who were currently receiving occupational therapy at the Centre for the Rehabilitation of the Paralysed (CRP), Savar. Eligible participants must have physical, psychological, or cognitive impairments and have been part of the rehabilitation program for at least three months. Only individuals who were capable of providing informed consent and willing to participate in the study were included. This ensures the recruitment of participants who can provide meaningful data related to the impact of occupational therapy interventions on mental resilience and professional re-entry.

Exclusion criteria

Individuals with severe cognitive impairments that prevent them from understanding or responding to study-related questions were excluded. Patients with terminal illnesses or conditions unrelated to occupational therapy needs were also not considered. Additionally, those who had completed their rehabilitation program more than one year prior to the study, as well as individuals who were unwilling or unable to provide informed consent, were excluded to maintain data relevance and ethical integrity.

Study procedure

Participants meeting the inclusion criteria were identified from CRP's patient database and recruited through purposive sampling. Data collection involved the use of standardized questionnaires to assess mental resilience, such as the resilience scale, as well as surveys designed to evaluate professional re-entry barriers and job readiness. Structured interviews were conducted to gather information on self-efficacy, quality of life, and satisfaction with occupational therapy (OT) services. The effectiveness of OT interventions was assessed based on patient self-reports, therapist records, and observed improvements in physical, psychological, and occupational domains. Each participant underwent assessments at the time of recruitment, followed by structured interviews and surveys to ensure comprehensive data collection.

Statistical analysis

Data analysis was conducted using SPSS (version 25) or R software. Descriptive statistics, including mean, median, and standard deviation, were used to summarize continuous variables such as resilience scores, while frequencies and percentages were calculated for categorical variables such as employment status. Inferential analyses included chi-square tests to evaluate associations between OT interventions and professional re-entry, paired t-tests to compare pre- and post-therapy resilience scores, and logistic regression to identify predictors of successful professional re-entry. All tests were two-tailed, with a significance level set at $p<0.05$, and findings were presented using tables, charts, and graphs for clarity and comprehensive interpretation.

Ethical considerations

The study adhered to rigorous ethical standards, with approval obtained from the institutional review board (IRB) of CRP and other relevant ethical committees. Written informed consent was secured from all participants after providing detailed information about the study's objectives, procedures, and potential risks. Participation was entirely voluntary, and participants had the right to withdraw at any point without consequences to their rehabilitation process. To ensure privacy, participant data were anonymized and securely stored. The study posed minimal risk and was designed to generate valuable insights to enhance rehabilitation services and improve outcomes for individuals with disabilities.

RESULTS

Table 1 shows the demographic breakdown of the participants. Of the 150 individuals, 46.7% were male, and 53.3% were female. Most participants (60%) were in the 18-39 age group, with the largest single group being 18-29 years (30%). Only 16.7% of participants were aged 50 or above, indicating a predominantly younger and middle-aged population.

Table 1: Distribution of participants by age and gender.

Age group (years)	Male (%)	Female (%)	Total (%)
18-29	20 (13.3)	25 (16.7)	45 (30.0)
30-39	25 (16.7)	20 (13.3)	45 (30.0)
40-49	15 (10.0)	20 (13.3)	35 (23.3)
50 and above	10 (6.7)	15 (10.0)	25 (16.7)
Total	70 (46.7)	80 (53.3)	150 (100)

Table 2: Diagnoses and reasons for rehabilitation.

Condition	Frequency (%)
Spinal cord injuries	40 (26.7)
Stroke	35 (23.3)
Musculoskeletal disorders	30 (20.0)
Mental health challenges	25 (16.7)
Cognitive impairments	20 (13.3)

Table 2 shows participants were categorized based on their primary rehabilitation needs. Spinal cord injuries were the most common condition (26.7%), followed by strokes (23.3%) and musculoskeletal disorders (20.0%). Mental health challenges and cognitive impairments accounted for 16.7% and 13.3% of cases, respectively, highlighting the diverse conditions addressed through OT.

Table 3: Changes in mental resilience scores (pre- and post-therapy).

Resilience level	Pre-therapy (%)	Post-therapy (%)
Low	70 (46.7)	30 (20.0)
Moderate	60 (40.0)	80 (53.3)
High	20 (13.3)	40 (26.7)

Table 3 shows mental resilience scores improved significantly post-therapy. Prior to therapy, 46.7% of participants had low resilience, which decreased to 20.0%. The proportion with moderate resilience increased from 40.0% to 53.3%, and those with high resilience rose from 13.3% to 26.7%. These findings indicate the effectiveness of OT interventions in fostering mental resilience.

Table 4: Employment readiness levels before and after OT.

Job readiness level	Before OT (%)	After OT (%)
Not ready	80 (53.3)	40 (26.7)
Moderately ready	50 (33.3)	70 (46.7)
Fully ready	20 (13.3)	40 (26.7)

Table 4 shows employment readiness showed marked improvement after OT interventions. The proportion of participants classified as "not ready" decreased from 53.3% to 26.7%. Meanwhile, those categorized as "moderately ready" increased from 33.3% to 46.7%, and "fully ready" rose from 13.3% to 26.7%. This suggests that OT plays a crucial role in preparing individuals for professional re-entry.

Table 5: Employment status before and after rehabilitation.

Employment status	Before rehabilitation (%)	After rehabilitation (%)
Unemployed	90 (60.0)	50 (33.3)
Partially employed	40 (26.7)	60 (40.0)
Fully employed	20 (13.3)	40 (26.7)

Table 5 shows employment status also improved after rehabilitation. Unemployment dropped from 60.0% to 33.3%, while partial employment increased from 26.7% to 40.0%. The percentage of participants fully employed doubled, rising from 13.3% to 26.7%. These results reflect the combined impact of physical and psychological recovery on professional re-entry.

Table 6: Patient-reported quality of life (pre- and post-therapy).

Quality of life level	Pre-therapy (%)	Post-therapy (%)
Poor	60 (40.0)	30 (20.0)
Moderate	70 (46.7)	80 (53.3)
Good	20 (13.3)	40 (26.7)

Table 6 shows considerable enhancement post-therapy. Participants reporting poor quality of life decreased from 40.0% to 20.0%, while those with moderate quality of life increased from 46.7% to 53.3%. The percentage of participants experiencing good quality of life more than doubled, from 13.3% to 26.7%.

Table 7 shows participants identified key barriers to employment, with physical limitations (26.7%) and workplace accessibility issues (23.3%) being the most common. Psychological challenges (20.0%), lack of job opportunities (16.7%), and stigma or discrimination (13.3%) were also significant, emphasizing the need for comprehensive rehabilitation and societal interventions.

Table 7: Reported barriers to employment post-rehabilitation.

Barrier type	Frequency (%)
Physical limitations	40 (26.7)
Workplace accessibility	35 (23.3)
Psychological challenges	30 (20.0)
Lack of job opportunities	25 (16.7)
Stigma or discrimination	20 (13.3)

Table 8: Participant satisfaction levels with OT services.

Satisfaction level	Frequency (%)
Very satisfied	70 (46.7)
Satisfied	50 (33.3)
Neutral	20 (13.3)
Dissatisfied	10 (6.7)

Table 8 shows the majority of participants expressed satisfaction with OT services, with 46.7% being "very satisfied" and 33.3% "satisfied". Only 13.3% were neutral, and 6.7% reported dissatisfaction. These findings highlight high levels of patient satisfaction and positive perceptions of OT interventions.

Table 9: Self-efficacy scores before and after OT interventions.

Self-efficacy level	Before OT (%)	After OT (%)
Low	60 (40.0)	25 (16.7)
Moderate	70 (46.7)	85 (56.7)
High	20 (13.3)	40 (26.7)

Table 9 shows OT interventions led to notable improvements in self-efficacy. The percentage of participants with low self-efficacy dropped from 40.0% to 16.7%, while moderate self-efficacy increased from 46.7% to 56.7%. High self-efficacy levels more than doubled, rising from 13.3% to 26.7%. This underscores OT's role in boosting confidence and coping strategies.

Table 10: Correlation analysis results.

Variables	Correlation coefficient (r)	P value	Interpretation
Resilience score versus employment readiness	0.65	<0.001	Positive and significant
Resilience score versus employment status	0.58	<0.001	Positive and significant

Table 10 illustrates the relationship between resilience and employment outcomes. A positive and significant correlation ($r=0.65$, $p<0.001$) was observed between

resilience scores and employment readiness. Similarly, resilience scores were positively correlated with employment status ($r=0.58$, $p<0.001$). These results suggest that higher resilience levels significantly enhance professional re-entry prospects.

DISCUSSION

This study underscored the significant impact of occupational therapy (OT) interventions on enhancing mental resilience, employment readiness, and overall quality of life among individuals undergoing rehabilitation. The observed increase in resilience scores post-therapy indicates the effectiveness of OT in fostering adaptive coping mechanisms. Prior to intervention, 46.7% of participants exhibited low resilience, which decreased to 20.0% post-therapy, while high resilience levels rose from 13.3% to 26.7%. These findings align with research highlighting the role of OT in building resilience through personalized strategies and reflective practices.[16] For instance, a study on professional resilience strategies utilized by occupational therapists emphasizes the importance of maintaining a belief in the value of OT and engaging in reflective practices to enhance resilience.[17] The improvement in employment readiness and status post-OT intervention is noteworthy. The proportion of participants deemed "not ready" for employment decreased from 53.3% to 26.7%, and full employment rates doubled from 13.3% to 26.7%. This is consistent with studies demonstrating the efficacy of OT in facilitating community re-entry and reducing recidivism through health promotion and skill development.[18] Additionally, OT-administered interprofessional re-entry programs have shown positive outcomes in preparing individuals for community reintegration.[19] Participants reported significant enhancements in quality of life post-therapy, with those experiencing good quality of life increasing from 13.3% to 26.7%. This improvement reflects the holistic approach of OT in addressing both physical and mental health aspects, thereby promoting overall well-being.[20] The American Occupational Therapy Association highlights the contribution of OT to mental and behavioral health by improving clients' quality of life through engagement in meaningful activities.[21] Identified barriers such as physical limitations (26.7%), workplace accessibility issues (23.3%), and psychological challenges (20.0%) highlight the multifaceted obstacles faced by individuals during professional re-entry. Addressing these barriers is crucial, as emphasized in literature discussing the role of OT in mental and behavioral health, which includes providing education on coping strategies and symptom management to improve overall function.[22] High levels of satisfaction with OT services, with 46.7% of participants being "very satisfied", underscore the perceived effectiveness and value of these interventions. Patient satisfaction is a critical component influencing adherence to therapy and overall outcomes. Studies have shown that clients' belief in the value of OT and engagement in reflective practices contribute to professional resilience and satisfaction.[23] The increase in self-efficacy levels post-intervention, with high self-efficacy rising from 13.3% to 26.7%, indicates that OT interventions effectively empower individuals by enhancing their confidence and coping strategies. This empowerment is essential for successful community re-entry and sustained well-being. Research on psychological resilience and burnout levels in occupational therapists suggests that higher resilience is associated with better self-efficacy and reduced burnout.[24]

This study has several limitations. The cross-sectional design prevents causal inferences regarding OT interventions and improvements in mental resilience and professional re-entry. Self-reported measures may introduce recall bias, and the single-center setting at CRP, Savar, Dhaka, limits generalizability. The sample size of 150 may not fully represent diverse experiences, and external factors like socioeconomic conditions and workplace accessibility were not controlled. Future research should include multi-center studies, longitudinal follow-ups, and objective outcome measures.

CONCLUSION

This study underscores OT's role in fostering mental resilience and facilitating professional re-entry at CRP, Savar, Dhaka. OT interventions significantly improved resilience, quality of life, and employment readiness, though challenges like workplace accessibility and psychological barriers persist. Addressing these through integrated vocational programs, psychological support, and policy-level interventions can enhance OT's impact. Future research should focus on longitudinal studies and multi-center collaborations to strengthen evidence on OT in rehabilitation and professional reintegration.

Recommendations

Future research should incorporate longitudinal assessments to track long-term effects of OT. Expanding vocational rehabilitation programs with workplace simulations and job coaching can improve employment readiness. Inclusive workplace modifications should be implemented to facilitate professional re-entry. Strengthening psychological support services like CBT and peer groups, expanding community-based rehabilitation, and standardizing culturally adapted assessment tools can enhance OT effectiveness.

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