ABSTRACT

An experimental community based randomized controlled study was conducted to assess the effectiveness of Community Based Occupational Therapy (CBOT) intervention program for stroke clients in Kattankulathur block, Kancheepuram District, Tamil Nadu, India. This is the first documented study in CBOT intervention for stroke in Tamil Nadu. The main objective of the study was to determine the effectiveness of CBOT for stroke clients in the Kattankulathur Block.

The setting selected for the study was 141 villages from Kattankulahtur block. After explaining the study and obtaining their consent, the clients were selected by simple random sampling technique to conduct the study. The sample size was 176, 88 in each group were selected in which 2 samples dropped out in the experimental group and 3 samples dropped out in control group. Ethical aspects of the study were considered throughout. To assess the feasibility of the study, a pilot study was conducted.

The pretest was done in both groups with the structured interview questionnaire on clinical variables, cost variables and on outcome variables of stroke clients with FIM, MoCA and SSQOL. Clients in the experimental group were given Community Based Occupational Therapy intervention for 45 minutes per session, 3 sessions in a week for 8 weeks.

Reliability of the tool was established by test retest method. At the end of 8 weeks, posttest 1 was done to both groups. At the end of 6 months, posttest 2 was done to both groups with the same tool. A self diary was maintained and it was
monitored by the researcher throughout the study. At the end of the study, the control group clients were also taught with the booklet.

**Major Findings of the study**

Out of 1,97,596 population 257 stroke clients were identified. Stroke was common among the age group 46-55 years (67.26%). Male outnumbered female (males=182, female=75), majority of stroke clients were married (184, 71.6%), majority (72) of stroke clients were illiterate (28.4%). 64 stroke clients belong to income group ( Rs.801/-Rs.1209/-) and majority (99) stroke clients were bread winner of their family. Ischemic stroke was the most common type (54.1%) followed by Hemorrhagic (45.9%). Similarly left side stroke was common (60.9%) than right side stroke (39.3%). Majority of stroke clients had spasticity (32.3%) and were in Brunnstrom stage 4 both in arm (57.0) and in hand (47.4%). Hypertension was the most common medical problem (61.1%) followed by Diabetes mellitus (22.2%). Siddha was most sorted alternative treatment (25.6%), majority of stroke clients tried home remedy (96.4%) and black magic (77.7%).

Demographic variables age, sex, marital status, education, religion, family income, type of family and bread winner of the family have been matched between the experimental and the control group. In clinical variables stroke type, stroke side, duration of illness, complication, any other medical problems, alternative therapy, home remedy and black magic were matched.

In the experimental group there was significant difference between pretest and posttest scores of Motor and cognitive components of FIM scale. The pretest
experimental group mean scores of FIM was (63.01, SD=11.82) and the posttest mean score was (86.93, SD=11.40) with mean difference (23.92) significant within group (F=232.23, P<0.001). Whereas in the control group the pretest mean score was (62.67, SD=11.92), posttest mean score was (64.00, SD=11.93) with mean difference (1.33) and it was statistically not significant. The results indicate that CBOT intervention program for stroke clients in the community was effective in improving their activities of daily living performance.

In the experimental group, major difference was there between pretest and posttest scores of MoCA scale. The pretest mean scores of MoCA was (11.13, SD=1.43) and the posttest mean was (18.79, SD=2.46) with mean difference (6.88) significant within group (F=744.42, P<0.001). Whereas in the control group the pretest mean was (11.62, SD=11.92), posttest mean was (12.28, SD=11.93) with mean difference (0.66) and it was statistically not significant. The results revealed that CBOT program for stroke clients in the community was effective in improving their cognitive abilities.

In the experimental group there was noteworthy difference between pretest and posttest scores of SSQOL scale. The pretest experimental group mean scores of SSQOL was (101.62, SD=19.98) and the posttest mean score was (146.76, SD=24.73) with mean difference (45.14) significant within group (F=443.86, P<0.001). Whereas in the control group the pretest mean score was (101.53, SD=18.81), posttest mean score was (103.62, SD=17.83) with mean difference (2.09) and it was statistically not significant. The results revealed that CBOT
intervention for stroke clients in the community was effective in improving their quality of life.

There was significant, moderate posttest correlation between stroke clients FIM and MoCA score ($P \leq 0.001$). Significant, moderate correlation was noticed between stroke clients FIM and SSQOL score ($P \leq 0.001$). There was significant, moderate correlation between MoCA and SSQOL score among stroke clients ($P \leq 0.001$). In the control group there was no significant correlation between clients FIM and MoCA score, FIM and SSQOL score and between MoCA and SSQOL score among stroke clients.

With regard to cost comparison, there was significant difference in rehabilitation cost between CBR and IBR in the experimental group ($t=20.31, p=0.001$). Significant difference in rehabilitation cost was observed between CBR and IBR in the control group ($t=22.76, p=0.001$). Cost comparison analysis between the experimental and the control group in IBR showed that there was no significant difference in the rehabilitation cost ($t=0.3, p=0.71$). The cost comparison analysis between the experimental and the control group in CBR showed that there was no significant difference in rehabilitation cost ($t=0.6, p=0.29$).

It is clear from this study results that the CBOT intervention was effective in improving the performance in activities of daily living, cognitive and perceptual abilities and quality of life. It was also proved that Community Based Rehabilitation is less expensive than Institutional Based Rehabilitation for stroke clients.