**AOTA’S EVIDENCE EXCHAGE**

**CRITICALLY APPRAISED PAPER (CAP) WORKSHEET**

**General Instructions: Please insert your responses in the boxes provided. Refer to the CAP Guidelines for submission criteria and detailed instructions on how to fill out each section of the worksheet.**

**CITATION AND DOI NUMBER (APA Format)**

**Martín-Martín, L. M., Valenza-Demet, G., Jiménez-Moleón, J. J., Cabrera-Martos, I., Revelles-Moyano, F. J., & Valenza, M. C. (2014). Effect of occupational therapy on functional and emotional outcomes after hip fracture treatment: A randomized controlled trial. *Clinical Rehabilitation, 28*(6), 541–551. https://doi-org.libproxy.eku.edu/10.1177/0269215513511472**

**CLINICAL BOTTOM LINE**

Briefly state the intervention in the study including its frequency, duration, and application to a specific setting and population. **Discuss how the evidence can be used to inform and guide occupational therapy practice (i.e., occupation-based interventions within the scope of traditional or emerging practice) AND how practitioners can use the evidence relative to the target population and practice setting. Implications need to be reported in consideration of the strength of the evidence (i.e., type of study design, level of evidence, identified study limitations, internal validity rating). Provide clear and specific recommendations as to how the findings may (or may not) be implemented in clinical practice,** **program development, education and training, and/or research. Please keep in mind that you are reviewing only one article, and therefore, the implications should reflect this single study only.** *Character count limit: 1500*

**The intervention of this study included combining occupational therapy (OT) with standard care provided to patients with a hip fracture at a rehabilitation and trauma hospital in the inpatient trauma ward. The first session of OT intervention occurred the day following surgery and intervention was provided 5 days a week. The first session lasted 60 minutes and the following sessions lasted for 20 minutes. All OT interventions followed the OT guidelines delivered by a qualified occupational therapist. By adding OT to the standard care in comparison with the control group, it was found that at the 6 month follow up the group receiving OT had better scores in all outcomes being measured including function, independence, emotional distress, and fatigue. Practitioners can utilize this evidence from this randomized controlled trial to educate the hospitals and medical teams on the importance of adding occupational therapy to the treatment plan in patients admitted with hip fracture injury. This randomized controlled trial includes a control group, experimental group, pre and post testing, and randomization resulting in this study being classified as level 2 evidence. There are limitations including the outcome measurement tools being utilized and no stratified randomization for gender differences. When developing a hip fracture standard care protocol in other hospitals, it is important to include this study to educate the stakeholders on the importance of adding occupational therapy to improve function, emotional distress, fatigue, independence, and to potentially reduce social and family costs. This research also supports the need for further research to be implemented on OT interventions and the impact on hip fracture recovery.**

**RESEARCH OBJECTIVE(S), DESIGN TYPE, AND LEVEL OF EVIDENCE**

*Character count limit: 350*

**The objective of this research was to see if patient outcomes in the areas of function, independence, emotional distress, and fatigue improved in the hip fracture population when occupational therapy is added to the physiotherapy rehabilitation. This is a level two randomized controlled trial (RCT). This RCT included a control group, experimental group, pre and post testing, and randomization.**

**PARTICIPANT SELECTION**

**How were participants recruited and selected to participate? What were the inclusion and exclusion criteria? *Character count limit: 600***

Between the months of June 2011 and January 2012, 354 patients were admitted to Virgen de las Nieves University Hospital with a hip fracture injury. During this recruitment period all 354 patients were invited to participate pending meeting the inclusion and exclusion criteria. Exclusion criteria included if an individual had cognitive impairment, other organ failure, were non-community dwelling, a prior history of traumatic lesion in the lower extremities, and if the individual received any rehabilitation following discharge. Inclusion criteria included the participant being able to follow directions, participate in the therapy, read the information sheet, and sign the informed consent.

**INTERVENTION(S) AND CONTROL GROUPS**

List each group (i.e., Group 1, Group 2, etc.).Includebrief description of the intervention. How many participants in the group? Where did the intervention take place? Who delivered? How often? For how long? *Character count limit: 1500*

**Group 1 included the experimental group which received 1-month combined therapy of occupational therapy (OT) and physical therapy (PT) referred to as the CT group. In this group, the participants received standard hospital care following a hip fracture with OT added. Group 2 included the control group which received the standard care from the hospital following a hip fracture which includes PT, medical treatment, no OT, referred to as the SC group. There were 354 patients admitted for hip fracture, 232 excluded due to not meeting the criteria, and of the 122 participants eligible, the participants were randomized into each group, 61 in group 1 and 61 in group 2. The intervention took place in a rehabilitation and trauma hospital in the inpatient trauma ward. In group 1, the participants received standard care from PT using the physiotherapy protocol for hip fracture and treatment from the medical and nursing team which is standard following hip fracture. In group 2, the same delivery was provided from the medical team, nursing team and physical therapy with individual OT added following the OT guidelines delivered by a qualified occupational therapist. The OT program began the day after surgery, 5 days a week until discharge, lasting 60 minutes for the first session and 20 minutes for the following sessions. In group 1, the mean number of OT sessions was 6.35. The mean number of PT sessions in group 1 was 6.29 and 6.95 in group 2. The OT intervention included theoretical and practical sessions including but not limited to positioning, bed mobility, transferring, dressing, techniques for sitting and standing, managing walking/steps, technical aides for activities of daily living, fall prevention, home environment/furniture advice and health advice.**

**OUTCOME MEASURES**

List only measures used in the study that are relevant to occupational therapy. Include the outcome measured. Is the measure reliable? Is the measure valid? When is the measure used? *Character count limit: 900*

**All assessments were used at hospital admission, hospital discharge, and follow ups at one, three and six months. The Goldberg General Health Questionnaire which has shown good intra-rater and inter-rater reliability was utilized to measure the emotional distress and fatigue outcome. To assess fatigue, the BASDAI questionnaire item number one was answered and recorded using the visual analogue scale (VAS) which the researchers reported is an easy way to measure fatigue as the VAS has been utilized and proven valid in other studies however according to the researchers, there is no validated assessment known to measure fatigue specifically. The Harris Hip Score is an instrument that has shown reliability for measuring hip function and the instrument has been validated. The Harris Hip Score assesses function, range of motion, pain, and activity of the hip. The Modified Barthel Index (MBI) measure activities of daily living (ADLs) in 10 areas. The MBI demonstrates good inter-rater reliability and validity.**

**RESULTS**

List key findings based on study objectives. *Character count limit: 1200*

At baseline measurements, there was no significant differences between the CT group and SC group. With emotional distress, there was significant differences between the CT and SC groups at 1, 3 and 6 months with a p value of (*p* <0.001). The SC group reported greater emotional distress. The SC group initially reported more fatigue however there was a higher report of fatigue in month 3 in the CT group. At 6 months, there was a significant difference with a decrease in fatigue in the CT group of 14 points, with a p value of (*p* = 0.044). In both groups there was a significant decrease in level of independence at 1 month (p < 0.001) however at 6 months there was a significant difference in both groups with the CT group showing better results with the MBI (*p* = 0.048). These findings demonstrate that participants who receive OT following hip fracture injury did significantly better in emotional distress and significantly better with fatigue levels at 6 months. There were improvements noticed with ADL independence and function in both the SC and CT group, the CT group did slightly better. There was improvement with short term ability to perform ADLs with the CT group however after 2 months there was no longer a significant difference. The study found that adding OT to the standard care following a hip fracture injury improves the patient’s independence with ADLs, functional performance, and psychological well-being.

**LIMITATIONS**

As applicable, identify any of the following biases and limitations:

Was there measurement bias (i.e., evaluators blind to treatment status, recall or memory bias)? Was there intervention bias (i.e., contamination, co-intervention, timing of intervention, site of intervention, use of different therapists to provide intervention, baseline equality)? Was this study adequately powered (large enough to show a difference)? Were the analysis methods appropriate? **Were statistics appropriately reported (in written or table format)?** Was participant dropout less than 20% in total sample and balanced between groups? List any additional study limitations. *Character count limit: 1500*

**In the randomization, data collection and data analysis, it was blind for the researchers and interviewers in charge which helped strength the research however there were limitations such as no stratified randomization for gender differences. For fatigue measurement, there were no validated assessments found by the researchers. The Harris Hip Score was designed for surgical patients, but it was utilized in this study for patients who were unfit for surgery as well. Another limitation is the confronting questions included in the Goldberg General Health Questionnaire as discussed in the research. This study was large enough to show a difference and the analysis methods were appropriate. Statistics were appropriately reported and there was only a 5% drop out in the total sample and the sample was balanced between groups with 61 participants in the SC group and 61 participants in the CT group. At the end following 6 dropouts, there was 57 participants analyzed in the CT group and 59 analyzed in the SC group. It is felt by this CAP author was 20-minute sessions provided by OTs are not long enough in the inpatient trauma ward to see a significant difference therefore timing of intervention was a limitation for this study. It was only described that a qualified occupational therapist provided the intervention. More information about the occupational therapist including years of experience, practice setting, and certifications should be included to strengthen the study. Furthermore, function in this study should be better described with explanation of what the authors mean by function and with more description on ADLs assessed, functional occupations included, and instrumental activities of daily living assessed.**

**CONCLUSIONS**

State the authors’ conclusions related to the research objectives. *Character count limit: 600*

The authors concluded that community dwelling individuals that go through a hip fracture injury show improvements in perceived health and fatigue when adding occupational therapy to the standard care in combination with physical therapy. It is concluded that occupational therapy intervention needs to be added to the intervention program and it is felt by the researchers that more studies need to be conducted for hip fracture patients and functional recovery. The authors conclude that patients who receive occupational therapy following a hip fracture injury report improvements with emotional distress and fatigue following six months, and better independence at one month.

**CAP AUTHOR INFORMATION**

List full name(s) of all participants (i.e., students, faculty advisor) and credentials.

Kasi Gannon, MS, OTR/L

Dr. Camille Skubik-Peplaski, PhD, OTR/L, FAOTA

CAP Worksheet adapted from “Critical Review Form--Quantitative Studies.” Copyright © 1998, by M. Law, D. Stewart, N. Pollack, L. Letts, J. Bosch, & M. Westmorland, McMaster University. Used with permission.

For personal or educational use only. All other uses require permission from AOTA.

Contact: [**www.copyright.com**](http://www.copyright.com)