

UCA Occupational Therapy Student Abstracts

2025 Cohort

Applied Research III

The Effectiveness of the St. Joseph Catholic Church's Bereavement Program

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Faculty Mentor: Dr. Gangluff

The purpose of this study was to determine the effectiveness of the St. Joseph's Catholic Church bereavement program in Conway, Arkansas. Bereavement is the process of grieving the loss of someone or something. Bereavement groups are intervention approaches to help individuals through this process. A sample of 8 individuals composed of 2 participants, 5 program volunteers, and 1 program director volunteered to be included in this research study. Methods used to collect qualitative data were one interview with the director, and 2 focus groups, one for the participants and one for the volunteers of the program. Three themes emerged from the focus groups and interviews. First, all the participants would like to better the process of outreach within the church and in the community. Second, encourage support and connection within the group. Third, all participants are motivated to grow and change to meet the needs of the community. In conclusion the St. Joseph Catholic Church bereavement program perceived its effectiveness through the use of open group discussion within small groups, videos, and pamphlet materials. Improvements to the program could be implemented through recruitment process and increased small group discussions.

Testing an Assumption of Occupational Adaptation: The influence of Energy Level on Solving a Word Puzzle

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Faculty Mentor: Dr. Lorrie Paschal

Our study aims to answer if an individual will yield more efficient adaptive responses when using a combination of primary and secondary energy levels when solving a word puzzle compared to using primary energy alone. Data collected based on participants' generated words were compared to the developed answer key to determine the number of correctly generated words each participant had developed. The study evaluated whether primary or the combination of energies is more effective in completing an occupational challenge. Results indicated by p-values for a total number of words generated for the total administered six minutes ($p=.993$), for the number of words after the first three minutes ($p=.132$), and for the final three minutes ($p=.682$). Therefore, there was no significant difference between the mean of the total number of words generated by participant groups. This study raises several questions that warrant further investigation, such as the use of primary and secondary energy for this particular task completed by these two groups. Researchers should consider examining different occupational challenges, tests with different age groups, and in various settings (Creswell & Creswell, 2018).

Age-Related Low Vision and Quality of Life

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This mixed-methods study explored how age-related low vision impacts quality of life (QoL) in adults over 65 with glaucoma, macular degeneration, or diabetic retinopathy. Thirteen participants with diagnosed low-vision conditions were interviewed and assessed using the RAND-36 tool. Z-scores across nine categories revealed trends: physical function (-0.98), energy/fatigue (-0.65), and social functioning (-0.51) were notably affected. Participants who adopted adaptive strategies experienced higher QoL, regardless of disease severity, while those whose valued occupations were disrupted reported significantly lower QoL. Low-vision is defined as a condition that cannot be corrected with standard treatments (e.g., glasses, contact, surgery), and interferes with daily tasks and independence. The study applied the Canadian Model of Occupational Performance and Engagement (CMOP-E), which emphasizes meaningful occupational engagement. Findings aligned with literature indicating that QoL is closely tied to the ability to participate in valued occupations. While some studies rely heavily on standardized assessments, this research highlights the importance of client-centered approaches to fully understand the lived experiences of individuals with low vision. Occupational therapists are crucial in helping this population adapt through timely interventions. This research supports that even with irreversible vision loss, maintaining engagement in meaningful activities can preserve life satisfaction and well-being. Greater emphasis on client-reported experiences is needed in future research to improve clinical strategies and support for individuals with low vision.

Perspectives on the use of Theory in Occupational Therapy Practice

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This research seeks to understand the perspectives of occupational therapy practitioners,educators, and students on the use of theory in practice. Occupational therapy theory use in practice impacts client outcomes and encourages evidence-based practice within the field. A gap exists regarding occupational therapists' knowledge of theory and the application of theory in practice. Three focus groups were utilized for this study including occupational therapy practitioners, educators, and students. Focus group discussions were guided utilizing semi-structured question guides with secondary prompts to allow for enhanced discussion. The Occupational Adaptation (OA) model was used to guide data collection and data analysis.From these focus groups, themes were identified from each group. The three focus groups emphasized theory understanding and application in practice, challenges and barriers in theory application, professional development related to theory, and communication and advocacy of the occupational therapy profession relating to theory. The focus group findings highlighted the importance of theory use in practice while exploring the barriers present in theory application.This research seeks to address the gap in occupational therapy literature regarding theory use in practice by understanding the perspectives of occupational therapy practitioners, educators, and students.

The Relationship Between Nine-Hole Peg Test Scores and Functional Task Performance Times

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The Nine-Hole Peg Test (NHPT) and Purdue Pegboard Test (PPT) are common dexterity assessments used to determine hand function. The purpose of the study is to evaluate the relationship between older adults' manual dexterity scores on the PPT and NHPT and their timed performance on standardized buttoning and tying tasks. The literature review determined gaps found in the literature are the comparisons of functional tasks to the PPT and NHPT assessments within the older adult population. There are results that support the reliability and validity of the PPT, but the time aspect can be seen as a limiting factor. The population for this study is older adults aged 65 and older in three specified living situations: community-dwelling, assisted living, and rehabilitation centers. This study contained 35 participants with ages ranging from 69 to 94 years old with 14 males and 21 females. It was hypothesized that participants who scored higher on the PPT (more pins or parts placed) would have an inverse relationship with times required to complete the standardized buttoning and tying tasks. When analyzing the data to determine relationships of the Nine-Hole Peg Test (dominant hand) scores to functional tasks, it was found that there was a relationship between the buttoning task to the scores on the test and no relationship with the tying task. When assessing the correlation between the Purdue Pegboard Test, Nine-Hole Peg Test, buttoning, and tying, it was found that an inverse relationship existed between these assessments. This was an expected outcome due to the difference in measurement units between the PPT (number of pegs placed) and the remainder of the assessments (time). Future research should be conducted to determine additional correlations between dexterity assessments and functional tasks.

The Effect of Functional Activities on Balance within the Community-Dwelling Older Adult Population

Lauren Lennon

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This study aimed to measure the balance of community-dwelling older adults and evaluate the effectiveness of activities at the Hawks Senior Wellness and Activity Center (HSWAC) on functional balance. The research question was: What impact do activities have on the older adult population concerning their functional balance and perception of fall risk? An explanatory sequential mixed design was used to assess the effectiveness of activities on participants' balance and fall efficacy. Participants engaged in three weekly activities: bean bag baseball, chair volleyball, line dancing, silver sneakers, table tennis, chair yoga, or strength training. The study included 27 seniors, with ten completing pre- and post-tests using the ABC Scale, TUG, and One-legged stance test. Eight participants attended focus groups with guided questions. After five weeks, participants were reassessed with the same instruments. A paired samples t-test showed no significant improvement in balance: TUG- $t(9) = 0.492$, $p < 0.49$; ABC Scale Part 1- $t(9) = 0.396$, $p < 0.49$; ABC Scale Part 2- $t(9) = 0.73$, $p < 0.49$; 1-legged standing balance on the right leg- $t(9) = 0.897$, $p < 0.49$; and 1-legged standing balance on the left leg- $t(9) = 0.318$, $p < 0.49$. Quantitative data showed no significant improvement between pre- and post-assessments. Focus groups revealed themes of improved confidence, no perceived balance improvement, and increased awareness of surroundings. The study concluded that five weeks is insufficient to observe improvements in balance, suggesting that future research should involve a longer observation period and a larger, more diverse sample size.

The Effect of Teaching Modalities on The Learning of Anatomy of First-Year Occupational Therapy Students: Cadaver & Anatomage

Alex Neri, Taylor Schwaller, Olivia Tuggle, & Abigail Webb

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During the COVID-19 pandemic, a notable discrepancy emerged between online anatomy learning and traditional classroom instruction with cadaver labs (Rosario, 2021). This gap could potentially be addressed by advanced technologies, such as the Anatomage Table (Martín et al., 2018). This study aimed to assess the effectiveness of different learning methods for anatomy among occupational therapy students, specifically focusing on relative mastery as defined by the Occupational Adaptation theory (Schkade & Schultz, 1992). Using a quasi-experimental quantitative design, the study compared two teaching methodologies: traditional cadaver-based instruction and Anatomage Table learning. A pre-and post-test knowledge assessment, along with a relative mastery scale, was employed to measure each method's effectiveness, efficiency, and student satisfaction. Results indicated a significant difference in relative mastery scores ($U = 322.0$, $p = 0.01$). Students who learned with cadavers showed a greater average difference in relative mastery (6.13, $SD = 4.59$) compared to those using the Anatomage Table (1.75, $SD = 5.40$). The findings suggest that students may prefer traditional cadaver-based learning over newer Anatomage Table methods. However, this pilot study was limited by its small sample size and used a non-parametric test. The study recommends further research with a larger sample to more accurately assess these differences and address potential biases or limitations. This could provide a clearer understanding of how different learning modalities impact anatomy education and student mastery.

Relevance of Interprofessionalism for Occupational Therapy Students and Practitioners

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Interprofessionalism is the method of therapists working together to provide the best care to their clients. Best care is not always easy to implement; University of Central Arkansas (UCA) occupational therapy (OT) students and OT practitioners shared what they believed to be factors that promoted or inhibited interprofessionalism. The purpose of this study is to improve interprofessional education for OT students prior to their fieldwork experience. This study was a general qualitative study comparing perspectives on interprofessionalism among the students and practitioners utilizing semi-structured interviews. Interviews revealed that intentional relationships, barriers, quality of care, respect and trust, and humanity are all factors that impact interprofessionalism. These results indicate that the quality of collaboration among OT and other disciplines can affect the quality of care for their patients, and the experience that practitioners and third-year students gain while working in an interprofessional setting affects the performance capacity in these environments. The results of this study could be used to support the implementation of interprofessional opportunities for UCA OT students within their program curriculum. Further research in this area could include measuring the levels of preparedness and confidence with interprofessionalism among OT students before and after completing fieldwork. Future research could also include using quantitative methods to measure OT student readiness within an interprofessional team nearing graduation. Identifying the major factors that contribute to effective interprofessional collaboration allows for the growth of all future healthcare practitioners and interprofessional teams.

Efficacy of Caregiver Education on Assistive Technology for Carers of Persons Living with Dementia

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In an era where technology increasingly shapes our lives, understanding how it can enhance the care of individuals with dementia is crucial. This study investigated how caregiver education affects the perceived knowledge, use, and need for assistive technology for individuals with dementia. Participants were 8 caregivers that we recruited from the Interprofessional Therapeutic Activity Program (I-TAP) at the University of Central Arkansas. The study consisted of a sample of convenience with 8 participants (6 female, 2 male). Researchers administered an in-service pre-test and post-test to determine the effects of an educational module on caregivers' knowledge and use of AT. No significant difference was found in results for understanding of pre- and post- in-service ($z=1.0$; $p>0.05$). A focus group was conducted following the post-test to receive feedback on effectiveness of in-service from participants. Results were inconclusive due to small sample size. However, evaluation of caregivers proved beneficial. Our focus group allowed us to gain a deeper understanding of participants' experiences from the in-service. The focus group resulted in 5 themes: Effectiveness of Specific Technology, Educational Needs and Continuous Learning, Barriers and Challenges in Technology Adoption, and Support and Community. Given its importance, future research and larger sample size will be needed to better understand the impact of assistive technology on this specific population.

Efficacy of an Interprofessional Inservice on Creating 3D Printed Switches and Modifying Toys

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When children experience challenges impacting their participation in play, the role of an occupational therapist is to help find ways for a client to overcome these barriers. While it is not uncommon for therapists to use prefabricated switches to adapt toys or leisure items as an intervention technique, there are few studies addressing the implementation of 3D printed switches for toy modification specifically. Purpose: The purpose of this quantitative quasi-experimental study was to evaluate the effectiveness of an interprofessional inservice on 3D printing and switch-adapted toys as well as the perspectives of local healthcare professionals, a sample of convenience consisting of therapists and students in Conway, AR, before and after attending the inservice. Method: Pre and post data obtained from an 11-item Likert scale measuring knowledge and confidence in 3D printing and toy modification were compared through use of the Wilcoxon Signed Ranks test. Results: A statistically significant difference between pre and post results was found in the areas of knowledge, competence, and on one theory related item ($p < 0.5$). Conclusion: Previous research has shown that 3D printing is becoming more widespread across healthcare professions. Results of this research support the benefit of an interprofessional inservice on participants' knowledge, confidence, and interprofessional role competence and the impact that 3D printed switches for toy modification can have on therapy practitioner and student confidence, knowledge, and implementation when collaborating on an interprofessional team.