Open Access

OBM Geriatrics

LIDSEN Publishing Inc.

Original Research

Role of Activity Professionals in Applying APIE Model to Enhance Residents' Activity and Engagement in Long-Term Care Settings

Xiaoli Li [1, *], Kendall Brune [2], Jean Keller [3], Jennifer Stelter [4], Stan Ingman [5]

1. School of Health Sciences, Southern Illinois University, 1365 Douglas Drive, Carbondale, IL, USA; E-Mail: xiaoli.li@siu.edu; xli.li@outlook.com
2. Arise Veteran Foundation, 1010 Camilla Caldwell Lane, Nashville, TN, USA; E-Mail: kbrune2339@gmail.com
3. Department of Kinesiology, Health Promotion, and Recreation, University of North Texas, 1155 Union Circle, Denton, TX, USA; E-Mail: jean.keller@unt.edu
4. Research Director of Linked Senior, 1400 K Street 11th Floor NW, Washington, DC, USA; E-Mail: jstelter@linkedsenior.com
5. Department of Rehabilitation and Health Services, University of North Texas, 410 S. Avenue C, Denton, TX, USA; E-Mail: stan.ingman@unt.edu

* **Correspondence:** Xiaoli Li; E-Mail: xiaoli.li@siu.edu; xli.li@outlook.com

Academic Editor: Calogero Caruso

Special Issue: Enhancing the Quality of Care for the Elderly in Long-Term Care Settings

OBM Geriatrics
2023, volume 7, issue 2
doi:10.21926/obm.geriatr.2302239

Received: August 23, 2022
Accepted: June 14, 2023
Published: June 25, 2023

Abstract

Residents' activity is a strong contributor to the quality of life in long-term care facilities. Hence, activity professionals have an essential role to play in enhancing residents' activity engagement. Professional practice model for activity professionals includes Assessment, Planning, Implementation, and Evaluation (APIE model). Although activity professionals have made advances in demonstrating their value, few studies have focused on the APIE model for activity professionals in long-term care facilities. A survey was conducted to help understand the role of activity professionals in using APIE in long-term care. Questionnaires were completed by 195 activity professionals working as activity directors and activity staff in long-

term care settings. The major factors studied were job background, certification, and the performance of activity professionals using the APIE model. Findings showed that 11.8% of the activity professionals had a high school education, 12.3% had no certification, and 9.2% of them had unrelated certifications. When examining the APIE model, we found that activity professionals used person-centered approaches when they assessed residents` needs and wants, planned and implemented the activities, but lacked evaluation when measuring the outcomes; 79.5% of the participants were not tracking the number of minutes residents spent on activities; and 72.8% of the respondents did not measure the impact of resident engagement on clinical outcomes such as falls, depression, cognition, and medication use. Lack of professional training and the application meaningful evaluation related to the impact of activities with residents by activity professionals may challenge administrators' capacity of estimating the need, value, and role of activity professionals within long-term care facilities. The study advocates for applying the APIE process to the delivery of activities and evaluation of the benefits of residents` activity and engagement.

Keywords
Activity professionals; APIE model; resident activity and engagement

1. Introduction

There are more than 8.3 million people receiving long-term care services in the United States. The majority of these older adults have multiple chronic conditions (e.g., vascular disease, dementia, arthritis), require on-site 24- hour health care support, and reside in 15,600 nursing homes, 28,900 assisted living or similar residential aged care communities [1]. Due to the decline in cognitive and physical abilities, residents in long-term care facilities tend to lead sedentary lifestyles [2]. As a result, loneliness, depression, social isolation, and the increased risks of physical diseases are observed among residents in long-term care facilities [3-5].

To deal with insufficient activities within long-term care facilities, in 1987, Omnibus Budget Reconciliation (OBRA`87) required nursing facilities to attain and maintain residents' highest practicable physical, mental, and psycho-social well-being [6]. A program of activities in long-term care were included in these mandates.

After the enactment of OBRA`87, two primary federal regulations that affect the program of activities provided in nursing homes were put in place. The first regulation is Federal Regulation 248, which requires the facility to "identify each resident's interests and needs; and involves the resident in an ongoing program of activities that is designed to appeal to his or her interests and to enhance the resident's highest practicable level of physical, mental, and psychosocial well-being." ([7], p. 92). The second regulation is specific to activity personnel, F-249, addresses the qualification of the activity director, who-- (i) Is a qualified therapeutic recreation specialist or an activities professional who-- (A) Is licensed or registered, if applicable, by the State in which practicing; and (B) Is eligible for certification as a therapeutic recreation specialist or as an activities professional by a recognized accrediting body on or after October 1, 1990; or (ii) Has 2 years of experience in a social or recreational program within the last 5 years, 1 of which was full-time in a patient activities program

in a health care setting; or (iii) Is a qualified occupational therapist or occupational therapy assistant; or (iv) Has completed a training course approved by the State ([7], p. 96).

Notably, the Centers for Medicare and Medicaid Services (CMS) has listed several options for long-term care facilities in terms of who should direct the program of activities. Thus, there are different certification bodies providing various certifications for activity personnel. According to the National Certification Council for Activity Professionals, there are more than 150,000 caregivers educated, trained, and certified as activity directors and activity staff to work for residents in long-term care facilities [8]. In addition, the National Council for Therapeutic Recreation Certification (NCTRC) reported that 17.1% of Certified Therapeutic Recreation Specialists (CTRSs) work in nursing homes, and 6.3% work in assisted living [9]. These two certification bodies are the main organizations responsible for the credentialling of activity professionals. A study by Campbell [10], indicated that activity personnel should fall into three categories: therapeutic recreation specialists and occupational therapists; certified activities professionals; and activity assistants with limited training in planning and executing activities. For this paper, activity professionals refer to persons in any of these categories as the study intends to help define the role of activity professionals in activity programming in long-term care facilities.

Activity and social engagement are strong contributors to quality of life and flourishing for residents in long-term care [11-13]. A qualified activity professional is the one who knows residents' history, respects their needs, and enables their potential and dreams to be recognized [14]. However, little is known about an activity professional's work and practices. Historically, the nursing process was first introduced in 1967, also referred to as the APIE model, and consists of four stages; Assess, Plan, Implement and Evaluate [15]. The APIE model encourages a systematic and evidence-based approach that would create consistency in individualized patient care [16]. While APIE is a person-centered approach to services, it has also been used in measuring the performance of nursing staff [17]. Activity professionals may adopt the APIE model as they commit to enhancing resident engagement through assessing resident needs, planning individualized engagement activities, implementing that plan, and then evaluating success.

The review of the literature demonstrated a lack of research specific to the role of activity professionals in applying the APIE model to enhance the quality of life and well-being among long-term care residents. Additionally, it was discovered less is known about activity professional experiences working with residents to promote engagement. Therefore, the purpose of this study is to describe the role of activity professionals and their experiences in activity programming for residents in long-term care facilities with a focus on resident engagement. The research questions included:

1. What are the educational backgrounds and the qualifications of the activity professionals in long-term care facilities?
2. What is the status of the APIE application and implementation process among activity professionals in long-term care facilities.

The research is a pilot study about the performance of activity professionals. The educational backgrounds and qualifications of the activity professionals in long-term care would help us to understand the whole picture about activity professionals. We used these descriptive data to explore the roles of activity professionals implementing APIE model to support residents. Future research may need to provide more evidence on relationship between performance of activity professionals and quality of care.

2. Methods

2.1 Sample and Instrument

A sample of full-time practicing activity professionals from long-term care facilities across the U.S. was selected for this study. The selection was delimited to only full-time practicing activity professionals in the long-term care facilities to reduce input that was from individuals who were not frontline staff in the field (e.g., educators, part-time staff, and volunteers). The study used a Survey Monkey electronic questionnaire that was approved by the university's IRB and distributed through the Linked Senior Website. The questionnaire included 31 items. Major categories included background information, getting to know your resident (assessing), programing activities, implementing activity, and evaluating outcomes. A total of 195 completed surveys based on these criteria.

2.2 Data Collection

Responses were extracted from the survey with both quantitative and qualitative (i.e., open-ended questions). Data management and analyses were performed with SPSS (IBM, 2016; v.24). Data Analysis Descriptive statistics were used to describe, organize, and summarize the data. The crosstab program in the Statistical Package of Social Sciences (SPSS) was used to determine the accuracy of the ratings for each question. Percentages of respondents were indicated for each response. Frequencies and modal distributions of the completed questionnaires were obtained.

3. Results

One hundred and ninety-five survey participants responded to the questionnaire identifying their roles as activity professionals. Descriptive information about the sample was collected using a demographic data sheet. Characteristics of the respondents include current job position, characteristics of the facility, highest level of education achieved, certification, and the number of activity personnel employed in the setting. Table 1 shows the background information of activity professionals and facilities.

Table 1 The Characteristics of Activity Professionals and Long-term Care Facilities (N = 195).

Demographics	*n* (%)
Levels of care	
1 level	7 (4)
2 levels	55 (28)
3 levels	44 (23)
4 levels	77 (39)
No response	12 (3)
Residents in facilities	
0-100	114 (58)
101-200	55 (28)
201-500	16 (8)

500+	7 (4)
No response	3 (2)
Job title	
Activity director	149 (76)
Therapeutic Recreation Specialist	28 (14)
Occupational Therapist	3 (2)
Other	10 (5)
No response	5 (3)
Education	
High school	23 (12)
Some college	63 (32)
Bachelor's degree	73 (38)
Master's degree	26 (13)
No response	10 (5)
Certification(s)	
Activity Professional Certification	91 (47)
Certified Dementia Practitioner (CDP)	24 (12)
Certified Therapeutic Recreation Specialist (CTRS)	28 (14)
Licensed Occupational Therapist	3 (2)
No certifications	24 (12)
Other	18 (9)
No response	7 (4)

Combined facilities (had two or more care levels within one long-term care setting, such as independent living, nursing homes, assisted living, post-acute care, and/or memory care) represented 94% of the facilities identified by the respondents. The one level of care campus only represented 4% of the facilities surveyed. More than half of the respondents served between 0-100 residents (58%), 28% of the facilities had 101-200 residents, and only 8% served over 500 residents. These patterns are typical throughout the 40 States and indicate a trend toward the more manageable mid-size long-term care facilities.

It is interesting to note that 76% of the participants in the total sample stated their job title to be activity director. This percentage is reasonable since the Federal Guidelines use the term activity director. Less than half of the activity professionals responding held Activity Professional Certification (47%), 14% were Certified Therapeutic Recreation Specialist (CTRS) and 2% were Occupational Therapists (OT), 12% held a Certified Dementia Practitioner certification (CDP), and 12% had no certifications, 9% held other types of certifications, such as certified music therapist, Eden educator, and certified remotivating therapist. Participants were asked to state their highest level of education based on four categories. The educational backgrounds of activity professionals were diverse. The majority held a college degree (13% master's and 38% bachelor's degrees). Approximately 12% completed high school degrees and 5% did not respond to the questions. Overall, the respondents were from long-term care facilities serving no more than 200 residents, they held the title of activity professional or used the title given by their credential and had some college or held a college degree.

3.1 Activity Professionals and Use of the APIE Model

Healthcare and service providers use the assessment, planning, implementation, and evaluation process to deliver holistic, resident focused care. Each aspect of the process supports activity professionals in meaningful activities that engage residents.

3.2 Assessment

Activity professionals begin with an assessment phase to get to know residents and understand their strengths. The vast majority (99%) of the responding activity professionals indicated that they consider resident`s level of functioning information when they assess resident's needs (such as resident's cognitive, physical, social, emotional, behavioral functioning, and spiritual background). Nearly all of the activity professionals (99%) stated that they contemplated the resident`s diagnoses, symptoms, or conditions into their activity planning. Activity professionals were asked if they collected information about residents' preferences. The average activity preferences per resident that activity professionals collected was 9.6, the numbers ranged from 1-28, demonstrating variation. Table 2 shows how activity professionals used the APIE model to learn and deliver services with residents.

Table 2 Activity professionals' engagement with an APIE model.

APIE model	Assessment	Planning	Implement	Evaluation
Always considered residents' functional and background	99% (yes)			
Always considered a resident's diagnoses	99% (yes)			
No response	1%			
Average number of identified activities	9.6 (1-28 range)			
Used activity preference information in planning		41% (Always) 20% (75% of time) 22% (50% of time) 14% (25% of time) 3% (Never)		
Used level of functional and background information in planning		42% (Always) 18% (75% of time) 26% (50% of time) 10% (25% of time) 3% (Never)		
No response		1%		
Frequency of small group activities			61% (Daily)	

	8% (Less than daily) 30% (More than daily)	
No response	1%	
Frequency of large group activities	52% (Daily) 22% (Less than daily) 25% (More than daily)	
No response	1%	
One-to-one activity programming delivered	35% (Daily) 53% (Less than daily) 9% (More than daily)	
No response	3%	
Evaluated residents' participation in activities		77% (yes) 23% (no)
Tracked minutes of engagement in activities		22% (yes) 78% (no)
Measured clinical outcomes		27% (yes) 73% (no)

3.3 Planning

When the assessment was completed, results were consolidated and used in planning activity programs to support resident engagement. Approximately, 83% of the responding activity professionals indicated that they used residents' activity preferences over 50% of the time to plan activities. Similarly, 86% of the activity professionals used the residents' level of functioning to design activities at least 50% the time.

3.4 Implementation

Once the activity programs were designed, the next phase was implementation of the activities program with the residents. Approximately 61% of the respondents offered small group activities (i.e., less than 10 residents). Large group activities (10 or more residents) were offered daily by 52% of the respondents and 38% offered one-to-one activities daily. Interestingly, about 25% of the activity professionals offered more than one large or small group activity more than once per day. Fifty-three percent of the responding activity professionals offered one-on-one activities daily.

3.5 Evaluation

This fourth and final phase of the APIE process is evaluation. Evaluation in this process is the determination or judgement of the quality, importance, meaning, amount, or impact of the activities on the residents. Concerns about the efficacy of activity programs in achieving stated resident goals should be aligned with the aspects of assessment, planning, and implementation. Over three-fourths (77%) of the activity professionals stated that they evaluated a resident's level

of participation (i.e., engagement levels and nonattendance) in activities. But when asked if they tracked the number of minutes residents engaged in structured activities, less than a quarter (22%) stated that tracked the minutes of attending or engaging in activities. With regards to evaluating clinical outcomes (e.g., falls, depression, cognition or social functioning, medication use, return to hospital), 27% of the activity professions indicated measured this type of resident outcome.

4. Discussion

The purpose of this study was to investigate the educational backgrounds and the qualifications of the activity professionals in long-term care facilities and to explore activity professionals using the APIE model to promote activity engagement. The findings showed that the educational and experiential backgrounds of activity directors were diverse. There is no required educational degree for activity professions. Hence,12% of the responding activity professionals had a high school education and 13% have master's degrees. An interesting observation was 12% of the respondents did not have certification, which did not meet minimal CMS requirements for an activity professional. Approximately 6% of the participants who did not hold a certification indicated that they had enrolled in a certification program. This finding is consistent with previous research demonstrating individuals without degrees or certifications are being hired as activity personnel in long-term care facility [10]. Little appears to have changed with the qualifications of activity personnel in long-term care facilities over the past 10 years. This study suggests a need for a preferred higher level of education or professional development for activity professionals to better conduct the roles and responsibilities of their positions. According to DeVries [18] and Trahan [19], activity professionals are skilled at selecting resident activities designed to reduce social isolation, increase successful activity completion, and engage in meaningful activities. Successful programs use residents` past life experiences, health status, and preferences to design activities that promoting a person-centered care model [20], which meets Federal regulation requirements, reflects a person`s interests and lifestyle, are enjoyable to a person, helps a person feel useful, and provides a sense of belonging [21]. However, limited physician and nursing education programs or textbooks accurately describe activity professionals and their roles within long-term care facilities [22]. Consequently, the qualifications of activity professionals may not be well understood among staff of long-term care facilities and may also contribute to low performance in resident engagement. This study may encourage activity professionals in long-term care facilities to focus their education on topics such as the aging process, person-centered approaches, and benefits of activities with older adults. By doing so, activity professionals may better serve and support residents' engagement needs in long-term care facilities.

Additionally, the results of the study indicated most activity professionals assessed, planned, and implemented activities based on functional information, diagnoses, and preferences; yet, far less than the majority evaluated time of engagement in activities as well as their clinical outcomes. Findings illustrated that 78% of the respondents were not tracking the number of minutes residents attend structured activities, and 73% were not measuring the impact of resident engagement on clinical outcomes. Determining of the efficacy of activities on resident engagement is critical for valuing the role of activity professionals in long-term care facilities. This same result was found in several studies which frequently advocate for increased evidence-based research on the benefits of activity engagement among residents. For example, Skalko [23] argued for a more strategic initiative

to increase evidence-based practice and address the short and long-term challenges that activity professionals face in long-term care facilities. Similarly, Buettner, Lee, and Yang [24, 25] noted the lack of efficacy-based evaluation among activity professionals across settings and called for greater effort in generating meaningful outcomes that addressed the functional improvement of the residents. The lack of sound research on the role and outcomes of activity services has impacted the field. As a result, health care leaders have little familiarity with activity professionals and the benefits of their work which often leads to an underutilization of services [26]. Sadly, the studies supporting the findings of this study are over 10 years, indicating slight changes in the professional development of activity personnel.

Using the APIE model, activity professionals may commit to assessing resident needs, planning meaningful activities based on assessed needs, that when implemented lead to engagement because they meet needs, and then are evaluated to determine what outcomes are achieved. This process is central to activity service delivery, and as such, should be used by activity professionals. The APIE model provides a systematic approach for activity professionals to measure and manage resident engagement. Activity professionals will need to do more to demonstrate their value in addressing specific health and behavioral outcomes related to residents' well-being and engagement if they are to gain status in long-term health care facilities.

4.1 Limitations

This study explored activity professionals' backgrounds and methods of service delivery to engage residents in long-term care facility. The study was limited to a convenience sample of activity professionals working in U.S. long-term care settings. This sample provided a snapshot of activity personnel. Larger and randomized samples are needed to better understand the group. The findings illuminated limited perspectives regarding the role of activity professionals in long-term care. Additionally, there may be a connection between educational backgrounds of activity personnel and their use of the APIE model. This was not studied and should be. Given the APIE model have been introduced in health professions, it is possible that participants who had more advanced degrees in health-related use the APIE process more frequently and appropriately. This study due to its size and scope did not explore the relationship between activity professionals' degrees, certifications, and use of the APIE model. Future research may want to explore these variables and relationships. New evidence-based research can also explore the outcomes of interventions specific to activity professionals in long-term care facilities. Learning more about the impact of the role of activity professionals in the resident activity and engagement process is needed.

5. Conclusions

There is evidence of the importance of activity professionals related to engagement of residents in long-term care facility. However, lack of required professional training and credentialling and the lack of meaningful evaluation of activity personnel's work may lead administrators as well as policy makers to underestimate the value and role of activity professionals in long-term care facilities. This lays foundations that advocates for increased evidence-based research on the benefits of activities and how they support engagement with residents. This research needs to be disseminated within long-term care facilities, and to nursing, and geriatric health care professionals, addition to activity professionals. The sharing of research in long-term care facilities will help various professions

understand the scope of the different jobs and how activity professionals support residents and their quality of well-being and engagement.

Author Contributions

Xiaoli Li, Kendall Brune, and Jean Keller drafted the first manuscript, conducted data collection and data analysis. Jennifer Stelter and Stan Ingman conducted survey and participated in revising the manuscript.

Funding

The authors received no funding for this research.

Competing Interests

We have no conflict of interest to declare.

References

1. Harris-Kojetin LD, Sengupta M, Lendon JP, Rome V, Valverde R, Caffrey C. Long-term care providers and services users in the United States, 2015-2016. Atlanta, GA: National Center for Health Statistics; 2019; No. 43.
2. Lim KC, Kayser-Jones JS, Waters C, Yoo G. Aging, health, and physical activity in Korean Americans. Geriatr Nurs. 2007; 28: 112-119.
3. Friedler B, Crapser J, McCullough L. One is the deadliest number: The detrimental effects of social isolation on cerebrovascular diseases and cognition. Acta Neuropathol. 2015; 129: 493-509.
4. Loyola WS, Camillo CA, Torres CV, Probst VS. Effects of an exercise model based on functional circuits in an older population with different levels of social participation. Geriatr Gerontol Int. 2018; 18: 216-223.
5. Sepúlveda-Loyola W, Ganz F, Maciel RP, Lopes RD, Negri PS, Solorza EM, et al. Social participation is associated with better functionality, health status and educational level in elderly women. Braz J Dev. 2020; 6: 20690-20701.
6. Legg TJ, Nazarchuk SA, Adelman D. The recreation therapist versus the certified activity director: Which professional receives fewer deficiencies in long-term care facilities? Am J Recreat Ther. 2010; 9: 9-14.
7. Centers for Medicare and Medicaid Services. CMS manual system [Internet]. Baltimore, MD: Centers for Medicare and Medicaid Services; 2006. Available from: https://www.cms.gov/regulations-and-guidance/guidance/transmittals/downloads/r19soma.pdf.
8. National Certification Council for Activity Professionals. Homepage [Internet]. Kensington, MD: National Certification Council for Activity Professionals; 2021. Available from: https://www.nccap.org/.
9. National Council for Therapeutic Recreation Certification. NCTRC Job Analysis [Internet]. 2022. Available from: https://www.nctrc.org/about-certification/national-job-analysis/.

10. Campbell EJ. Best practices: Long-term care activity professionals as leaders. Seattle, WA: Seattle University; 2012. Available from: https://www.proquest.com/pagepdf/1356154490?accountid=7113.
11. Fortune D, Dupuis SL. The potential for leisure to be a key contributor to long-term care culture change. Leisure. 2018; 42: 323-345.
12. Genoe MR, Cripps D, Park K, Nelson S, Ostryzniuk L, Boser D. Meanings of therapeutic recreation: Professionals' perspectives. Leisure/Loisir. 2021; 45: 35-51.
13. Hebblethwaite S. "I think that it could work but...": Tensions between the theory and practice of person-centred and relationship-centred care. Ther Recreat J. 2013; 47: 13-34.
14. Loy T, DeVries D, Keller MJ. Recreational therapy in nursing homes: History, regulations, COVID-19, and beyond. Ther Recreat J. 2021; 55: 1-18.
15. Yura H, Walsh MB. The nursing process: Assessing, planning, implementing, and evaluating. Proceedings of the Continuing education series conducted at the Catholic University of America; 1967 March 2-April 27. New York: Catholic University of America Press.
16. Dyke J, Adams EV. A model for clinical supervision in the field of therapeutic recreation: The APIE/D model of clinical supervision. Ther Recreat J. 2021; 55: 432-443.
17. Vilmorin C, Stelter J. APIE: The importance of the assessment process [Internet]. Northbrook, IL: McKnight's Long-Term Care News; 2021. Available from: https://www.mcknights.com/marketplace/marketplace-experts/apie-the-importance-of-the-assessment-process/.
18. Dawn De Vries DH. Regulatory requirements for recreational therapy in nursing homes. Am J Recreat Ther. 2014; 13: 25-30.
19. Trahan MA, Kuo J, Carlson MC, Gitlin LN. A systematic review of strategies to foster activity engagement in persons with dementia. Health Educ Behav. 2014; 41: 70S-83S.
20. Silvers A, Wilson AM, Westgate G. Developing a therapeutic recreation dementia program. Long-Term Living. 2010; 59: 42-45.
21. Centers for Medicare and Medicaid Services. State operations manual: Appendix PP – Guidance to surveyors for long-term care facilities [Internet]. Baltimore, MD: Centers for Medicare and Medicaid Services; 2017. Available from: https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_pp_guidelines_ltcf.pdf.
22. Buettner LL. Therapeutic recreation in the nursing home. Reinventing a good thing. J Gerontol Nurs. 2001; 27: 8-13.
23. Skalko TK. RT research in the context of health care reform. Ann Ther Recreat. 2012; 20: 1-4.
24. Buettner LL. Gerontological recreation therapy: Examining the trends and making a forecast. Ann Ther Recreat. 2000; 9: 35-46.
25. Lee Y, Yang H. A review of therapeutic recreation outcomes in physical medicine and rehabilitation between 1991-2000. Ann Ther Recreat. 2000; 9: 21-34.
26. Harkins L, Bedini LA. Perceptions of healthcare administrators regarding recreation therapy in North Carolina. Ann Ther Recreat. 2013; 21: 16-31.