Increasing Participation in Activities with a Resident of an Alzheimer’s Unit in a Long-Term Care Facility, and the Effect on Mood

by

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ABSTRACT

The purpose of the present study was to increase the frequency and the duration of a resident’s participation in daily scheduled activities at a long-term care facility. The participant was a 75-year-old male resident with a diagnosis of Alzheimer’s disease who did not often participate in recreational activities. An ABAB reversal design was used in which the intervention phases consisted of least to most intrusive response prompts paired with behaviour-specific praise and positive phrases. The results were examined using percentage of nonoverlapping data, percentage of data points exceeding the mean, and percentage of change. The results indicated an immediate increase in the duration of participation in activities from the first phase of baseline ($M=10.8$, $SD=10.43$) to the first implementation of intervention procedures ($M=18.77$, $SD=8.04$), revealing the treatment as highly effective. The results also showed a 620% increase in the frequency of participation from the first phase of baseline to the first phase of intervention. As a secondary measure, the resident’s mood was assessed through the use of a self-evaluation picture rating scale. Although the relationship between participation in recreational activities and mood was not directly examined, an increase in the resident’s mood was obtained on days that participation in recreational activities occurred. The current study provides empirical support for the use of verbal and gestural response prompts, physical guidance, and behaviour-specific praise.
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# TABLE OF CONTENTS

ABSTRACT ......................................................................................... ii
ACKNOWLEDGEMENTS ..................................................................... iii
TABLE OF CONTENTS ....................................................................... iv
LIST OF TABLES ................................................................................... vi
LIST OF FIGURES ................................................................................ vii

**CHAPTER**

I. INTRODUCTION
Rationale ............................................................................................... 1
Overview ............................................................................................... 2

II. LITERATURE REVIEW
Overview of Dementia and Alzheimer’s Disease .................................. 3
Alzheimer’s Disease and Social Interaction ......................................... 4
Schizophrenia and Social Interaction ................................................... 4
Relevance of Activity for Individuals with Dementia ......................... 5
Participation in Activities and Mood ................................................... 6
Empirically Validated Interventions for Increasing Participation .......... 7
Prompts and Praise with Other Populations ........................................ 8
The Current Study’s Relationship to the Research Literature ............. 9

III. METHODOLOGY
Participant ............................................................................................ 11
Informed Consent ................................................................................ 11
Setting ................................................................................................. 11
Functional Assessment ......................................................................... 11
Measures and Data Collection ........................................................... 12
Design and Procedures ....................................................................... 12

IV. RESULTS
Functional Assessment Results ......................................................... 15
Baseline Results ................................................................................ 15
Intervention Results
  Duration of Participation ................................................................ 17
  Frequency of Participation ............................................................. 18
  Mood ............................................................................................... 19

V. DISCUSSION
Program Changes ................................................................................ 21
Maintenance and Generalization ....................................................... 21
Strengths and Limitations ................................................................. 21
Multilevel Challenges to Program Implementation .......................... 22
Contributions to the Field of Behavioural Psychology .................... 22
Recommendations for Future Research .............................................. 23
REFERENCES ...................................................................................... 24

APPENDICES
APPENDIX A: Consent Form ............................................................ 26
APPENDIX B: Adapted FACTS Interview .......................................... 29
APPENDIX C: Self-Evaluation Picture Scale ...................................... 31
APPENDIX D: FACTS Interview with Recreational Therapist .......... 32
APPENDIX E: FACTS Interview with RPN ....................................... 34
APPENDIX F: Raw Baseline Data of Participation in Activities .......... 36
APPENDIX G: Baseline Phase 1 Summary Statistics .......................... 38
APPENDIX H: Rating of Mood Intervention Phase 2 ....................... 39
APPENDIX I: Rating of Mood Baseline Phase 1 .............................. 40
APPENDIX J: Rating of Mood Intervention Phase 2 ....................... 41
APPENDIX K: Raw Data of Mood Rating ........................................ 42
APPENDIX L: Mediator Instructions for Intervention Procedures ...... 43
LIST OF TABLES

Table 1. Duration of Participation Summary Statistics ...........................17
LIST OF FIGURES

Figure 1. Percent of Duration of Participation in Activities ..................16
Figure 2. Frequency of Participation in Activities ...............................18
Figure 3. Average Self-Reported Rating of Mood .................................19
Chapter I: Introduction

Long-term geriatric care facilities often become a necessity as the population ages; unfortunately, residents of long-term care facilities frequently become inactive, and many residents do not engage or participate in social activities. When residents of long-term care facilities become idle, perceptions that the individual is lazy, withdrawn, or clinically depressed often surface. Engelman, Altus, and Mathews (1999) reviewed a study that was conducted with over 12 hours of observations on 11 nursing home residents, and it was identified that during 87% of the observation periods the residents engaged in no activity. Colling (2004) had similar observations, finding that “the most often observed behaviour was not doing anything” (p. 117).

Active participation for older persons plays a fundamental role in their physical, emotional, and social health. Research has demonstrated that involvement in activities is an important part in maintaining a high quality of life in geriatrics. Active participation was shown to have enough significant benefits that the 1987 Omnibus Budget Reconciliation Act mandated that residents of long-term care facilities be provided “… an ongoing program, directed by a qualified professional, of activities designed to meet the interests and the physical, mental, and psychological well-being of each resident…” (as cited in Thompson & Born, 1999, p. 171).

Although long-term care facilities provide recreational activities for residents, many individuals do not take part. Smith (2009) reviewed a study that found over 70% of residents of long-term care facilities over the age of 75 had some form of dementia. With Alzheimer’s disease being the most common form of dementia, the number of individuals with Alzheimer’s disease residing in long-term care facilities is increasing. According to Allen-Burge, Stevens, and Burgio (1999), 50% to 90% of individuals with symptoms of dementia display behaviour deficits during the progression of their illness; this may be displayed most prominently in functional and social areas. Although many cognitive and social skills are lost as Alzheimer’s disease progresses, it is essential to focus on the current abilities of the individual. Throughout the progression of Alzheimer’s disease, time spent in pleasurable activities can have physical, social, and emotional benefits.

Participation in structured recreational activities can play a critical role in improving the social, emotional, and physical aspects of life for residents with dementia in long-term care facilities. By participating more frequently in activities provided in long-term care facilities, residents may gain a stronger interest in activities, develop social relationships, and have an overall improvement in their mood.

Studies have shown that the most successful interventions to promote engagement in the geriatric population were providing cues and assistance, initiating the activity, giving guidance, and providing enjoyable activities (Colling, 2004). The use of prompts and praise to increase participation in activities is thoroughly examined in the literature review.

Rationale

It is evident that there are various physical, social, and emotional benefits of participation in daily activities, and a lack of engagement in activities can have negative effects on one’s overall well-being. In addition, the quality of one’s mood can have significant implications for
overall well-being and is associated with deficits in cognitive function, physical health, and social relationships (Schreiner, Yamamoto, & Shiotani, 2005). Spending time in recreational activities at long-term care facilities has the potential to improve dimensions of residents’ moods. Behavioural strategies, such as the use of prompts and praise to increase participation in recreational activities, could support individuals affected by the debilitating consequences of Alzheimer’s disease.

Overview

The focus of this thesis was to increase the frequency and duration of participation in activities with a resident living in a secure ward of a long term care facility, and to examine the effect that participation in activities had on his sense of mood.

In terms of increasing participation in activities, the use of verbal, gestural, and physical prompts paired with behaviour specific praise were applied. It was hypothesized that using the least to most intrusive prompts paired with behaviour specific praise would increase the resident’s frequency of participation in activities. The resident’s mood was assessed secondarily to determine if there was a change in the self-rating of his mood on the days that participation occurred.

A literature review was completed to gain an understanding of dementia and Alzheimer’s disease, the importance of participation in activity, and the effect that engagement in activities has on quality of mood. The relationship between the variables mentioned above was examined in a comprehensive literature review, which also provides an overview of Alzheimer’s disease and social interaction, and an overview of interventions for increasing participation in activities. Literature on schizophrenia was also reviewed, as the participant in this study had a formal diagnosis of schizophrenia. The participant information including background information and diagnoses is further described in the Methodology chapter.

Experimental case studies, empirical journal articles, theoretical review articles, and materials retrieved from professional websites and the Alzheimer Society of Kingston were also reviewed in Chapter II.

The methodology used in the current study is discussed in Chapter III. In addition, a thorough interpretation of the results is examined in Chapter IV, presented through descriptive statistics, figures, and tables. Participation in activities and daily mood ratings will be presented using a visual analysis. Chapter V of the current study includes a discussion of the intervention, as well as challenges to program implementation from a multilevel systems perspective, contributions to the field of behavioural psychology, and recommendations for future research.
Overview of Dementia and Alzheimer’s Disease

Dementia refers to a cluster of diseases that most commonly occur in the geriatric population. With dementia, there is a progressive decline in cognitive and behavioural abilities. Symptoms of dementia include a loss of memory, a change in judgement and reasoning, changes in mood and behaviour, and communication deficits (Alzheimer Society of Canada, 2009). Rates of dementia increase significantly with age, and only a few of these dementias are reversible. It has been shown that among 65-year-olds, the lifetime risk of developing any type of dementia has been estimated to be 11% for men and 19% for women. The most common type of dementia is Alzheimer’s disease, accounting for approximately two thirds of all cases of dementia (Gatz, 2007). The incidence of Alzheimer’s disease is expected to double over the next 20 years because the population is aging, and there is currently no cure or reversal for its progression (Hamdy, 2001). According to the Alzheimer Society of Canada (2010) currently over 500,000 Canadians are living with dementia and approximately 70,000 of those individuals are under the age of 65.

According to Hamdy (2001), Alzheimer’s disease can be classified into different stages. The early stages of Alzheimer’s disease are marked with only slight changes in personality and cognitive ability. Changes may include memory deficits such as the inability to name or recognize objects, communication difficulties, getting lost, mood changes, or depression (Alzheimer Society of Canada, 2008). As the disease progresses to the middle stage, the degree of cognitive impairment increases significantly. During the middle stage, there may be more frequent mood shifts, withdrawal, delusions, and uninhibited behaviours. In the late stage of Alzheimer’s disease, the individual often displays cognitive deficits as well as severe physical deficits. The individual may be unable to carry out voluntary activities, and have repeated falls. During the late stage of Alzheimer’s disease long-term care or twenty-four-hour assistance is often required, as individuals lose their capability for speech and require help with most activities of daily living.

Alzheimer’s disease is a progressive disease that is well known for its subtle onset. Understanding the changes and losses that are associated with Alzheimer’s disease can provide insight into the challenges faced by a person living with Alzheimer’s disease. One way to understand the changes associated with the disease is to understand what has been described as the “7 A’s of dementia” (Alzheimer Society of Canada, 2009).

The “7 A’s of Dementia

Anosognosia is one of the effects of Alzheimer’s disease, and refers to the loss of the ability to realize that there is anything wrong. A person who experiences anosognosia may not understand that they have a memory problem, such as amnesia, which is the loss of short-term and long-term memory. Another one of the “7 A’s” is agnosia, which is the loss of the senses including sight, taste, touch, sound, and smell. A person with agnosia may have difficulty recognizing people in their life, or sorting out what is seen and heard. A person with agnosia may also have an altered perception, which is the third of the “7 A’s”. Agnosia refers to the misinterpretation of sensory information, which can include the experience of hallucinations or delusions. An individual with Alzheimer’s disease may also experience apathy. Apathy is when an individual appears to be depressed and experiences a loss of drive or initiative. The other
“A’s” of Alzheimer’s disease are aphasia, meaning the loss of language or speech, and apraxia, which is the loss of the ability to initiate movement, and may also include the inability to understand terms such as up, down, back, front. Although the symptoms of dementia vary in frequency and severity between individuals, understanding the reasons for behaviour changes in a person can be helpful in accepting and supporting the person with the diagnosis (Alzheimer Society of Canada, 2010).

By understanding Alzheimer’s disease and the individual’s life experiences, the person’s physical, social, and emotional needs can be optimized. As the disease progresses, the individual’s needs will continue to change, but the need for overall health, stimulation, social interactions, and affection remain the same (Alzheimer Society of Canada, 2009).

**Alzheimer’s Disease and Social Interaction**

The ability to perceive and interpret emotional information is a critical skill for successful social interactions and maintaining interpersonal relationships. Phillips, Scott, Henry, Mowat, and Bell (2010) believe that decreased social interactions in persons with dementia may be a result of their lack of skill or ability to understand emotional signals from others. Previous studies have shown that emotion perception deficits are linked to interpersonal difficulties. Phillips et al. examined emotion perception skills involved in interpreting facial expressions in healthy adults compared to adults with Alzheimer’s disease. Twenty-seven participants with a formal diagnosis of Alzheimer’s disease were compared to thirty age-matched healthy participants in a study that examined emotion labelling, emotion description, executive function, and facial identity. Phillips et al. found that participants with Alzheimer’s disease had deficits in perceiving and identifying facial emotions as compared to the healthy control participants. Studies have shown that the effects of dementia can have an influence on the ability to decode facial expressions of emotion, which has been linked to difficulties in social interactions and maintaining interpersonal relationships. In another study, 570 charts of nursing home residents with a history of chronic psychiatric illness were examined. It was concluded that the majority of the residents had “no” or “mild” cognitive impairments, and that the most common symptom was social withdrawal (as cited in Harvey, 2005).

**Schizophrenia and Social Interactions**

Many older patients with life-long schizophrenia who leave long-term psychiatric care are not able to live independently. According to Harvey (2005), in 1986 it was estimated that there were as many as 200,000 individuals with lifelong schizophrenia in nursing homes. Because many individuals with schizophrenia have spent their entire lives in psychiatric care with no experience living independently, as they age, they are transferred to highly-structured residential settings such as nursing homes. During the first episode of schizophrenia, most individuals meet the clinical criteria for dementia because of the severity of cognitive impairment, regardless of the age of onset.

Schizophrenia is a mental disorder that is characterized by a severe disruption in cognition and emotion, which affects essential human abilities such as thought, perception, language, and affect. A person with schizophrenia may experience delusions, hallucinations, instability in thinking, and withdrawal from social activity. There is no single symptom that is definitive for a diagnosis of schizophrenia; rather, the diagnosis includes a pattern of signs and
symptoms in combination with a deficit in occupational or social functioning (Schizophrenia Society of Canada).

Hooker et al. (2010) stated that successful social interactions depend on the ability to accurately make social judgements of others based on various cues that indicate another person’s trait and state qualities, such as competence, anger, or boredom. These social judgments influence individuals’ overall impressions of others and are related to social behaviour. It has been shown that people with schizophrenia are not able to accurately judge social cues from others, such as facial expressions. Phillips et al. (2010) found that the failure to recognize facial affect is well documented in individuals with schizophrenia, and has been linked to poorer social competence, a lessening in social interactions, and reduced self-care. Paranoia, suspiciousness and distrust of others are common symptoms of schizophrenia and Hooker et al. concluded that it is rational to hypothesize that individuals with schizophrenia would perceive faces as less trustworthy than individuals who do not have schizophrenia. Hooker et al. examined this hypothesis through the use of rating the perceived trustworthiness of faces after the presentation of neutral, negative, or positive affective pictures. The results from the study showed that all of the participants in the study rated faces as less trustworthy following negative affect pictures than the faces presented following neutral or positive primes. In participants with schizophrenia this effect was significantly more evident, demonstrating that individuals with schizophrenia may have an exaggerated perception of negative affective information on social judgement. The authors of this study also found that the extent the negative affective picture influenced the perception of trustworthiness was associated with the participants severity of positive symptoms of schizophrenia, suggesting that individuals with schizophrenia may have an interpretive bias when judging the trustworthiness of others, consistent with feelings of paranoia. The findings of the study by Hooker et al. (2010) demonstrated an important relationship between individuals with schizophrenia and interactions with others, suggestive that impaired social perceptions could be a contributing factor to the social behaviour deficits seen in individuals with schizophrenia.

The findings of the previously mentioned studies by Hooker et al. (2010) and Phillips et al. (2010) demonstrate that individuals with Alzheimer’s disease or schizophrenia may have an impaired ability to accurately judge others’ emotions, which may have negative consequences on their social interactions.

Relevance of Activity for Individuals with Dementia

With the progressing severity of cognitive and behavioural deficits of individuals with Alzheimer’s disease, it is important to focus on the current capabilities of the individual. According to Thompson and Born (1999), studies indicate that older individuals who engage in simple activities such as reading groups and music appreciation, have been shown to have increased happiness and life satisfaction ratings, decreased depression, and improved self-esteem. For residents of long-term care facilities, participation in structured recreational activities fosters several quality of life dimensions such as enjoyment, the meaningfulness of activities, functional ability, and social engagement (Schreiner et al., 2005).

Phinney, Chaudhury, and O’Connor (2007) examined the meaningfulness of activity from the perspective of persons with dementia, and how they recognize its significance in their
lives. Participants in the study were involved in various everyday activities, such as relaxation and recreational activities, household chores, and social connections. It was found that engagement in these activities were meaningful in three ways. Participants experienced feelings of pleasure and enjoyment; they felt a sense of connection and belonging; and they were able to keep a sense of independence and personal identity.

Physical exercise not only has physical benefits, but has been shown to have mood enhancing benefits as well. According to Logsdon and Teri (2010), a number of studies indicate that higher levels of physical activity are associated with reduced depression in older adults, and that the benefits are maintained over a five-year follow-up period. In adults without any form of dementia, regular physical activity can increase strength and endurance, reduce the risk of developing age-related illnesses, and preserve the ability to stay functional and independent. Logsdon and Teri (2010) state that “...there is no reason to expect that persons with dementia will not experience many of the same overall health benefits from exercise as will any other adult” (p. 83).

Although long-term care facilities provide a variety of recreational activities to engage residents, in many cases people do not participate in the activities or they do not participate in ways which are likely to provide them with optimal physical or emotional benefits (Thompson & Born, 1999).

**Participation in Activities and Mood**

Moods are fundamental psychological states that can be derived internally or occur in response to an environmental event (McConville et al., 2005). The effects of mood can influence how individuals interpret the world and can also have an impact on behaviours. The process of aging can create potential challenges to mood regulation, such as health issues, physical deterioration, and the potential loss of personal relationships. Previous studies have shown the importance of measuring mood in the older-aged population using the two states of positive and negative affect. Positive affect relates to the measure of energetic arousal, and negative affect is the measure of feelings of unpleasant arousal.

A study conducted by Schreiner et al. (2005) examined the positive affect experienced by residents with Alzheimer’s disease during recreational activities compared to the amount of positive affect experienced during ordinary time. The authors found that structured recreation can be theoretically used to improve mood in people who lack other cognitive resources to achieve happiness, either through social engagement, or when they are alone. Schreiner et al. used previously published structured-observation instruments to measure behaviour and affect during ordinary time and during recreation time in thirty-five dementia residents at two nursing homes. The authors found significant differences in positive affect during recreation time as compared to ordinary time. During the observation periods, “happy” was recorded when the resident was obviously smiling or laughing. On average, during recreation time residents were observed to experience “happiness” over seven times more than during ordinary time. The authors of this study also found that 43.75% of the participants were observed to express happiness only during recreation time, and never during ordinary time. Schreiner et al. demonstrated that participation in recreational activities plays a significant role in stimulating a positive mood in Alzheimer’s residents of long-term care facilities.
Katt, Speranza, Shore, Saenz, and Witta (2009) examined the relationship between geriatric ability to perform various activities and emotional well-being. For the purpose of this study, a lack of depression was used as a negative indicator of emotional well-being. Ability to perform daily living activities was measured by four variables, which were the ability to climb stairs, the ability to walk a distance, the ability to perform general activities (e.g., getting up from a chair, picking up a coin), and the ability to perform instrumental activities (e.g., housework). Although the relationship between daily activities and a sense of emotional well-being is complex among older adults, the findings of this study suggested that activities of daily living directly influenced geriatric emotional well-being. Katt et al. (2009) state that when health problems affect the ability to perform basic tasks, an individual’s emotional well-being is at risk.

Mood quality has important implications for both physical and mental well-being. Poor quality moods are associated with deficits in the diverse areas of cognitive function, health, and social relationships. In older individuals, 11% to 30% demonstrated clinically significant symptoms of depression (Walker & Steffens, 2010). Depression is a mood disorder that is characterized by a combination of symptoms, including sadness, decreased interest or pleasure in daily activities, negative thoughts, a decreased level of energy, and disturbances in sleep, appetite, and thought processes. Walker and Steffens (2010) reviewed literature which presented key research related to depression and cognitive impairment in the geriatric population. It was found that most studies of Alzheimer’s disease reported symptoms of depression in 30% to 50% of those individuals with the disease. Symptoms of depression included a low mood, social withdrawal, apathy, and suicidal thoughts. It was found that it is not simple to distinguish the difference between depression and dementia, as depressive symptoms are distinct in several dementia-related illnesses.

The prevalence of individuals with Alzheimer’s disease, who have also been diagnosed with depression, is correlated with the severity of dementia. Walker and Steffens (2010) discussed a study in which symptoms of depression in individuals with Alzheimer’s disease and major depression were examined across levels of severity of cognitive impairment. It was found that individuals with mild dementia were more likely to display depressive symptoms, including low energy, depressed mood, and sleep disturbances. In conclusion, it has been shown that there is a positive relationship between depression and dementia.

Blake, Mo, Malik, and Thomas (2009) examined the effectiveness of physical exercise for the treatment of symptoms of depression in the geriatric population by reviewing randomized controlled trials and quasi-experimental studies. Inclusion criteria was literature that focused on the prevalence of depressive disorder after the use of physical exercise as an intervention, and depression or mood scores on standardized scales. In the review, eleven randomized controlled trials were included. In nine of the studies that were reviewed, positive results for decreasing symptoms of depression through the use of physical activity were found. The authors concluded that physical exercise programs do obtain clinically relevant results in the treatment of depressive symptoms in older individuals, and although exercise may not be an appropriate intervention for each individual in the geriatric population, it may be helpful to improve mood in some.
Empirically Validated Interventions for Increasing Participation

To increase or maintain desired behaviours in residents of long-term care facilities, many different intervention techniques have been used. Preliminary studies suggest that problematic geriatric behaviours, including behavioural deficits such as little activity, can be effectively treated using behavioural procedures (Allen-Burge, Stevens, & Burgio, 1999). The use of prompts and praise to achieve a desired behaviour is a behavioural method that has been shown to be effective with the geriatric population. Engelman, Altus, and Mathews (1999) examined the effects of the use of frequent verbal prompts and praise to increase engagement in daily living activities with older adults with dementia. During baseline, participants were observed engaging in only seven different basic activities, such as conversing, eating, exercising, and reading. Treatment techniques included making personal contact with each resident at least every 15 minutes, providing behaviour specific praise to residents for appropriate engagement, and offering a choice of at least two activities if a resident was not engaged at the time of personal contact. After treatment was implemented, residents engaged in the original seven basic activities with an additional 20 more advanced activities. Advanced activities included planting flowers, feeding and caring for a bird and dog, setting the table, playing the organ, and participating in crafts. The multiple baseline across morning and afternoon shifts showed a consistent increase in engagement in daily living activities, and suggested that the use of verbal prompts and praise increases the engagement in activities by older adults with dementia.

In a study by Thompson and Born (1999), correct participation was increased in an exercise class with four older adults. Each of the four participants had poor quality of participation, and it was believed that they were unlikely to produce any health benefits from their exercise. Correct participation in activities was recorded using a 10 second momentary time-sample procedure. At baseline, correct participation occurred in less than 50% of the recording intervals for each participant. The intervention consisted of praising the participants when they engaged correctly in an exercise, and physically guiding the correct exercise if the participants did not respond correctly to verbal instructions. During the intervention, correct participation in the activity increased to over 75% by each participant. The results of the study by Thompson and Born (1999) showed that the use of prompts and praise is an effective method to increase correct participation in exercise with geriatrics.

McClannahan and Risley (1975) examined residents’ levels of participation in appropriate activities. Participation in activities and time spent outside of the residents’ rooms averaged 20% when activities were not provided or encouraged, but increased to a mean of 74% on days when activities were provided and the residents were prompted to participate. The study showed that engagement could be improved by providing materials for activities, and verbally prompting residents to use the materials. The authors demonstrated that prompting initial engagement of participation is an essential factor of engaging residents of long-term care facilities in recreational programs.

Prompts and Praise with Other Populations

Gelgand, Hartmann, Cromer, Smith, and Page (1975) reviewed multiple studies which found positive comments or praise alone were unsuccessful and ineffective methods to increase behaviour in children; however, several studies expand on the research about praise and demonstrate that positive comments or praise can be an effective method for increasing or
maintaining a desired behaviour when paired with initial prompting of the desired behaviour (Engleman, Altus & Mathews, 1999; Mcclannahan & Risley, 1975; Thompson & Born, 1999).

Gelgand et al. (1975) effectively used prompts and praise to increase the rates of childrens’ donations to help a needy peer. Twenty-one children who displayed low baseline rates of donating were exposed to instructional prompts to donate and were praised each time they made a donation. Of the 10 children who responded temporarily to prompting, 4 children increased their donation rates when praised and continued to donate when praise was discontinued. Six additional children donated infrequently in the absence of praise, and at high rates when praised for donations.

Maeser and Thyer (1990) taught institutionalized adolescents with severe mental retardation to serve themselves appropriately during meals. A multiple-baseline design across three male adolescents with severe mental retardation was used. The authors found that the use of a task analysis paired with verbal prompts, physical guidance, praise, and correction was an effective behavioural intervention to teach a new behaviour.

The studies by Gelgand et al. (1975), and Maeser and Thyer (1990) both effectively used prompts and praise to either increase or maintain a desired behaviour with different populations.

**The Current Study’s Relationship to the Research Literature**

Individuals at any level of cognitive impairment can experience various benefits from exercise, but the degree of impairment must be considered when developing specific programs. For example, some individuals may require physical guidance to participate in activities, others are able to imitate movements gestured by the trainer, while some can follow simple verbal instructions (Logsdon & Teri, 2010).

The literature reviewed in this chapter supports the use of prompts and praise to increase or maintain a desired behaviour. Because the use of prompts and praise has been shown to be an effective method for increasing participation in activities, it was theorized that providing verbal, gestural, and physical prompts paired with behaviour specific praise would increase the frequency and duration of participation in activity in a resident of a secure Alzheimer’s unit in a long-term care facility.

The reviewed literature also highlights the importance of engagement in activity, and the potential mood enhancing benefits to participating in structured recreational activities for individuals with Alzheimer’s disease. When residents of long-term care facilities become inactive, it could lead to inaccurate perceptions of the person. Walker and Steffens (2010) feel that there is clearly a close relationship between depression and dementia, and an individual’s quality of mood has important implications for various aspects of physical, social, and mental well-being. In the current study the resident’s mood will be examined secondarily, which is described in Chapter III.

Encouraging residents of long-term care facilities to spend time in structured recreational activities is important as engagement in activity has various benefits, which can include a
stronger interest in activities, more social interactions with staff and other residents, or having an enhanced sense of mood.
Chapter III: Methodology

Participant
The participant in the current study was a 75-year-old male, with a diagnosis of Alzheimer’s disease who resided in a secure Alzheimer unit of a long-term care facility. He did not participate often in the scheduled programs and activities, thus he was referred to participate in the behavioural intervention by a recreational therapist who felt that increasing his level of participation in daily activities at the residence would have various social, emotional, and physical benefits to him. Before taking part in this program, the resident had not previously been involved in any interventions regarding his participation in activities or his mood.

The resident had a diagnosis of dementia, Alzheimer’s disease, and schizophrenia. It should be noted that at the time of the intervention any symptoms of schizophrenia were controlled well by medication and he did not demonstrate any positive symptoms of schizophrenia that affected his behaviour.

The participant was included in this study based on the following criteria: 1) a resident of a long-term care facility 2) who met the DSM-IV criteria for a diagnosis of Alzheimer’s disease, and 3) showed little to no participation in structured recreational activities.

Informed Consent
Ethics approval for this study was obtained from the Research Ethics Committee for Psychology at St. Lawrence College.

Informed consent was obtained from the resident’s power of attorney through an adapted version of the Behavioural Psychology program’s standardized consent form for students completing an applied thesis (Appendix A). The consent form outlined the title and purpose of the study, the risks and benefits of participating, confidentiality, and the right to withdraw from the intervention at any time. Written consent was obtained by the resident’s wife, who was his power of attorney, and assent was obtained from the resident to participate in the program by asking him if he wanted to work with the counsellor to increase his attendance at activities. A copy of the consent form with the student’s signature was also given to the resident’s wife to keep for her own records.

Setting
This study was conducted at a long-term care facility where the residents’ require 24-hour nursing care and supervision. Various recreational activities were provided within the long-term care facility on a daily basis. Activities were adapted and took place on the secure Alzheimer’s unit, tailored to fit the needs and capabilities of the residents’ with Alzheimer’s disease. Because the resident who participated in this study became anxious in large groups of people, this counsellor also conducted one-to-one activities which took place in the residents’ bedroom. One-to-one activities included activities such as painting or listening to music. This counsellor would only conduct one-to-one activities if the resident became anxious after attending an activity with a large number of people.

Functional Assessment
The functional assessment procedures consisted of a review of the resident’s file, semi-
structured interviews with the referring Recreational Therapist and a Registered Practical Nurse (RPN) of the Alzheimer’s unit, and a self-evaluation mood scale.

**Review of Case File**

The file review was completed to allow this author to become familiar with the resident’s history, and to identify any relevant information that would contribute to the success of the behavioural intervention. A full description of the file review can be seen in the Results chapter.

**Interviews with the Recreational Therapist and RPN**

March et al.’s (2000) Functional Assessment Checklist for Teachers and Staff (FACTS, Appendix B) was adapted by this counsellor, and completed by the Recreational Therapist and the RPN of the Alzheimer’s Unit to identify possible functions that contributed to the resident’s low participation rate in activities. Both of the respondents were interviewed by this counsellor and asked to describe the problem behaviour, as well as the antecedents and consequences of the resident’s low participation rate. The completed FACTS interviews are further analyzed in the Results section.

The resident in this study was described by the Recreational Therapist as withdrawn and was observed to spend most of the day in his room. He was also observed to become anxious when he was around other people. The resident frequently stated that he was “not doing well”, or feeling “okay”.

**Self-Evaluation (picture-rating mood scale)**

Information regarding the resident’s mood was collected by this counsellor by administering a self-evaluation picture scale to him before and after each scheduled activity, whether or not participation occurred. The scale consisted of four pictures of faces expressing different moods (e.g., very happy, happy, neutral, and sad). The self-evaluation picture scale can be seen in Appendix C. The self reported information from the mood scale was scored using a 4-point Likert scale, with a higher score indicating a more positive mood. The resident’s mood was assessed by asking him “how are you feeling right now?” and requesting that he point to the facial expression on the picture scale that best represented how he was feeling.

**Measures and Data Collection**

**Frequency and Duration of Participation in Activities**

Direct observation was used with a duration recording sheet to collect data between the onset of the resident’s participation in an activity and his termination of it. This counsellor recorded baseline information regarding the frequency and duration of participation in activities each time there was a scheduled recreational activity.

**Design and Procedures**

The current study used an ABAB reversal design, where baseline and treatment phases were each implemented twice. The A phases represented the baseline data, which involved observations and recording of natural occurrences of participation in activities. The B phases represented the treatment phases, which consisted of verbal, gestural, and physical prompts paired with behaviour specific praise. The first phase of baseline consisted of sixteen days of observations and the second phase of baseline observations continued for five days. Both phases of intervention procedures were implemented for ten trials immediately following baseline.
The intervention techniques and procedures were chosen based on the results from the functional assessment and baseline data. The intervention consisted of the use of least to most intrusive response prompts. The resident was verbally prompted to participate in the scheduled activity, and physically guided to participate if he did not engage following the verbal prompts. In addition, a variety of enjoyable activities to participate in were provided on a daily basis.

The treatment results were examined using percentage of nonoverlapping data (PND), percentage of data points exceeding the median (PEM), and percentage of change. The results with PND and PEM lines are presented in a visual analysis with a trend line in Chapter IV. The raw data regarding the frequency and duration of participation in activities from pre- and post-intervention are also examined using descriptive statistics and are described in Chapter IV.

**Independent Variables**

The independent variables in the study were verbal, gestural, and physical prompts, paired with behaviour specific praise.

**Verbal prompts**
Verbal prompts were used as the least intrusive prompt. Verbal prompts consisted of reminders (e.g., “There is music in the auditorium today”), questions (e.g., “Would you like to come to arts and crafts?”), and other verbal assistance (e.g., “I think you would really enjoy this activity”). After verbally prompting the resident a minimum of three times, gestural prompts were used.

**Gestural prompts**
A more intrusive prompt consisted of gestural or modeling prompts (e.g., pointing towards the activity), or walking towards the entrance of the resident’s room while still using verbal prompts. Gestural prompts were used a minimum of three times before moving to the next type of prompt.

**Physical prompts**
The most intrusive prompt consisted of gentle physical guidance which involved taking the resident’s hand and redirecting him towards the scheduled activity, while still using verbal prompt. If after the first attempt of physical guidance the participant resisted, then no further physical or verbal prompts were made.

**Behaviour specific praise**
Behaviour specific praise and positive phrases (e.g., “Excellent” or “you are doing a great job painting inside the lines”) were provided to the resident for his participation in an activity and he was thanked each time for his attendance.

**Dependent Variables**
The resident’s frequency of participation, the duration of time that the participant engaged in activity, and the resident’s rating of his mood were the dependent variables in the study.

For the purpose of the current study, participation in activities was broadly defined as any time the resident was engaged in any type of recreational activity. The definition of participation
was broad enough to include almost any form of appropriate behaviour such as listening to music with this counsellor, interacting with staff or other residents at scheduled recreational activities, and involvement in various psychomotor activities such as games and songs, or engaging with equipment or materials. Participation was said to be not occurring if the resident was laying in bed engaging in a passive behaviour.
Chapter IV: Results

In this section the results from the assessment procedures will be examined individually, and the data collected from the baseline observations will be presented. Based on the results of the functional and baseline assessments, a goal for the resident was established with weekly objectives.

Functional Assessment Results

Review of Case File [30-09-10]

The resident’s case file was reviewed by this counsellor in order to gather all relevant background information. The resident was admitted to the long-term care facility in April, 2010 after his wife was no longer able to care for him at home. Since being admitted to the facility, the resident’s level of participation in recreational activities decreased. The resident’s wife maintained a relationship with him after he was admitted to the residence by visiting him a few times a week, and the resident also has children who are not currently involved in his life.

It was identified that the resident was formally diagnosed with dementia, Alzheimer’s disease, and schizophrenia. It should be noted that behavioural symptoms associated with schizophrenia were well controlled by medication. At one point before this intervention began, an attempt was made to discontinue the medication for the symptoms of schizophrenia, but was later resumed due to a return of hallucinations and delusions.

Interview with the Recreational Therapist of the Alzheimer’s Unit using an adapted FACTS Interview [19-10-10]

March et al.’s (2000) Functional Assessment Checklist for Teachers and Staff was adapted by this counsellor for use in the current study. In order to assess the possible functions that contributed to the resident’s low participation rate in activities, the referring Recreational therapist completed the interview (Appendix D).

The Recreational Therapist described the problem behaviour as the resident not attending recreational programs, and when he did come to programs he would not stay for the entire duration of the activity. The Recreational Therapist also described that the resident became withdrawn or anxious when he was around large groups of people. His tendency to decline invitations to attend programs or to leave shortly after a program commenced occurred at various times throughout the day. The resident was described as withdrawn and was observed to spend most of the day in his room. When the resident was asked “how are you today?” a frequent response was that he was “not doing well”, or feeling “okay”.

The Recreational Therapist reported that the resident had a negative social interaction with another resident when he first arrived, which could be a maintaining factor of his lack of participation in activities. The Recreational Therapist indicated that the fear of having a negative social interaction and the presence of large groups of people during recreational activities were precursors to the resident’s lack of participation, which was maintained by social isolation. By spending most of the day in his room, the resident avoided social interactions, attention, and possible feelings of anxiety. Strengths that were identified in the resident were that he expressed an interest in certain programs and that he was polite and friendly. Strategies for responding to
the resident’s lack of participation noted by the Recreational Therapist were not forcing him to stay at the activity and thanking him for coming when he did.

Interview of a Registered Practical Nurse using an adapted FACTS Interview [19-10-10]
In order to assess the possible functions that contributed to the resident’s low participation rate in activities, a Registered Practical Nurse (RPN) from the Alzheimer’s Unit completed the adapted FACTS interview (Appendix E). The RPN acknowledged the resident as very friendly and appeared to enjoy engaging in conversation and being spoken to.

The RPN described the problem behaviour as the resident frequently leaving from meals and activities to return to his room, which occurred at various times throughout the day. The RPN also described the problem behaviour as the resident responding that he is “not sure” if he wanted to attend various activities. Environmental events which predicted the resident’s non-participation were identified as any recreational activity outside of his room, loud noise, and large crowds of people. Maintaining consequences to the resident’s behaviour were described as social isolation, and avoiding anything that may give him feelings of anxiety, such as noise and crowds.

The RPN believed that there were no current techniques being used to handle the behaviour, and strategies for responding to the behaviour included not forcing the resident to attend the activity.

Baseline Assessment Results
Frequency and Duration of Participation in Activities
During the first phase of baseline, a stable trend was identified across observations of 16 recreational activities, which is also shown as raw data in Appendix F. Overall across the first phase of baseline observations, the resident participated in 12.5% of the scheduled activities, and stayed for an average of 10.08% of the duration of each one-hour activity. During the second phase of baseline observations a stable trend was also identified. The frequency and duration of participation in activities was 0% across observations of five recreational activities. Summary statistics for the first phase of baseline observations are presented in a table which can be seen in Appendix G.

Intervention Results
Duration of Participation in Activities
A stable trend in the duration of participation data was identified across both phases of baseline observations, and an immediate increase in the duration of participation in activities was recorded during the intervention phases. The results were examined using PND, PEM, and percentage of change, which revealed the treatment to be highly effective. Although an increase was seen in the duration of the resident’s participation, he did not fully attend the entire duration of an activity.

Using the PND method from the first phase of baseline to the first phase of intervention, an 80% increase was seen in the duration of the resident’s participation. Using the PEM method, a 100% increase in the resident’s duration of participation was seen. The results indicated an increase in the duration of participation in activities from the first phase of baseline ($M=10.8$, $SD=10.43$) to the first implementation of intervention procedures ($M=18.77$, $SD=8.04$). The resident’s average duration of participation showed an 86.21% increase.
When the intervention procedures were removed for the second phase of baseline, the resident’s participation decreased to 0% across all five days of baseline observations. A direct increase in the duration of the resident’s participation was seen again during the second implementation of intervention procedures ($M=21.97$, $SD=7.09$). The resident’s duration of participation in activities increased to an average of 21.97% of ten one-hour activities. Using the PND method, this resulted in a 100% increase in the duration of participation from the second phase of baseline to the second phase of intervention procedures.

Figure 1 represents the resident’s average duration of participation in activities across all phases, with the PND lines extending from the highest baseline data points into the adjacent treatment phases. The PEM lines are seen extending from the median lines in baseline phases into the adjacent treatment phases.

![Figure 1](image_url)

**Figure 1.** Percent of duration of participation in activities

Table 1 presents the summary statistics of the mean, median and standard deviation of the duration of participation in activities across all phases of the ABAB reversal design.
Table 1
Summary statistics for the duration of participation in activities during the baseline and intervention phases

<table>
<thead>
<tr>
<th></th>
<th>Baseline Phase 1</th>
<th>Intervention Phase 1</th>
<th>Baseline Phase 2</th>
<th>Intervention Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>10.08%</td>
<td>18.77%</td>
<td>0.0%</td>
<td>21.97%</td>
</tr>
<tr>
<td>Median</td>
<td>0.0%</td>
<td>20.8%</td>
<td>0.0%</td>
<td>25%</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>10.43</td>
<td>8.04</td>
<td>0.0</td>
<td>7.09</td>
</tr>
</tbody>
</table>

*Frequency of Participation*

During the first phase of baseline observations of 16 recreational activities, the resident’s average frequency of participation was 12.5%. Out of ten trials during the first phase of intervention, the resident’s frequency of participation increased to 90% of the scheduled recreational activities, resulting in a 620% increase.

When the intervention procedures were removed for the second phase of baseline, the resident’s frequency of participation decreased to 0% of five scheduled recreational activities. During the second phase of intervention procedures, the resident’s frequency improved from a baseline level of 0% to 100% of ten scheduled recreational activities. Figure 2 represents the resident’s average frequency of participation in recreational activities across all of the conditions.

*Figure 2. Average frequency of participation in recreational activities across conditions*
Mood

The relationship between the resident’s mood and participation in activities was assessed secondarily. Although the relationship between participation in recreational activities and mood was not directly examined, an increase in the resident’s mood was obtained. Figure 3 represents the average self-reported mood rating across both intervention phases and the second phase of baseline. It should be noted that data were not collected on the resident’s mood during the first phase of baseline due to time limitations during this counsellor’s placement.

![Figure 3. Average self-reported rating of mood.](chart)

During the first phase of intervention, the resident’s average mood rating before the recreational activity was 1.09 on a 4 point Likert-scale. Post-activity, the average rating of the resident’s mood increased to 2.07, resulting in an 89.9% increase. During the second phase of baseline, no participation in recreational activities occurred and a decrease was seen in the average rating of the resident’s mood from 1.08 pre-activity to 1.06 post-activity. During the final intervention phase an increase was seen in the average rating of the resident’s mood increased from 1.08 pre-activity to 2.09 post-activity, resulting in a 93.52% increase. The daily self-reported mood ratings for the first and second phases of baseline observations and the second phase of intervention are also presented in visual analyses and can be seen in Appendices H, I, and J, respectively. Raw data on the rating of the resident’s mood is displayed in Appendix K.
V: Discussion

Changes that were made to the program throughout the intervention are examined in this section and plans for the maintenance and generalization of the behavioural intervention are discussed. This section also presents the strengths and limitations of this study and discusses the challenges of this program and its design using a multilevel systems perspective. Contributions to the field of behavioural psychology are considered as well as recommendations for future research.

It was hypothesized that using the least to most intrusive prompts paired with behaviour specific praise would increase the resident’s frequency and duration of participation in activities. The results confirmed the hypothesis, as a positive relationship between the use of prompts and praise and the frequency and duration of participation in recreational activities was demonstrated. As seen in the Results section, there was variability in the resident’s participation rates during the intervention phases. As discussed in the literature review, individuals with Alzheimer’s disease may experience a loss of drive or initiative, or may not be capable of doing anything at all. Individuals with Alzheimer’s disease may also become withdrawn from social interactions, and display cognitive or physical deficits (Alzheimer’s Society of Kingston, 2010). Because the resident had a formal diagnosis of Alzheimer’s disease, the symptoms associated with Alzheimer’s disease may have contributed to the inconsistency in his participation rates.

Although an increase in the rating of the resident’s mood was observed, this may have been a result of leaving the activity and returning to his room; however, while the resident was engaged in participation, he appeared to enjoy both the group activities provided by the residence and the one-to-one activities provided by this counsellor. Despite that it was not measured, the resident appeared to enjoy one-to-one activities more than group activities. The resident’s diagnosis of schizophrenia should be taken into account, as it may have had an effect on the intervention results. As reviewed in Chapter II, individuals with schizophrenia may have an impaired ability to accurately judge others’ emotions, which may have negative consequences on their social interactions (Hooker et al., 2010; Phillips et al., 2010). The symptoms associated with schizophrenia may have had an effect on the intervention results, as the resident would often display lower rates of participation during activities with large numbers of people.

The self-reported data on the rating of mood was consistently collected by this counsellor in the resident’s room. Because there are many cognitive deficits associated with Alzheimer’s disease, the resident may not have been able to remember attending the recreational activity, or the potential positive feelings and emotions associated with participation. Program changes could have included assessing the resident’s mood pre- and post-activity at the location of the scheduled recreational activity to account for these variables. The current study adds to the literature (Schreiner et al., 2005; Thompson & Born, 1999) regarding participation in structured recreational activities and quality of life dimensions, such as greater happiness.

Contrary to the studies reviewed by Gelgand et al. (1975) which demonstrate negative effects of prompts and praise, the current study is consistent with findings (Colling, 2004; Engleman, Altus & Mathews, 1999; Mcclannahan & Risley, 1975; Thompson & Born, 1999) that demonstrate that positive comments and praise is an effective behavioural procedure for
increasing or maintaining a desired behaviour, such as the frequency and duration of participation in activities.

**Program Changes**

During the second phase of intervention, the approximate number of people at each activity was recorded to determine if large groups of people had an effect on the resident’s participation rate. It was observed that the resident frequently became anxious during recreational activities with more people, and the duration of participation was often lower during these activities. The current program could have been extended to include a relaxation component to address the resident’s anxiety that he experienced during activities with large numbers of people. A relaxation program could also have been implemented prior to the intervention.

**Maintenance and Generalization**

When the resident achieved the goal objective for his participation in activities, the criterion level was increased. As the resident’s participation continued to increase in frequency and duration, other staff at the agency used natural praise in an attempt to increase the likelihood of generalization and to ensure that the results could be maintained by other staff at the long-term care facility.

**Mediator Training**

A detailed set of intervention instructions that described the procedure of using prompts and praise to increase participation in activities were prepared for future mediators. The instructions provided details of the process so other facilitators could continue to implement the behavioural intervention for the resident’s participation in recreational activities. A copy of the mediator instructions can be seen in Appendix L. By the end of this counsellor’s intervention, other personnel at the long-term care facility were able to successfully implement the behavioural intervention by using prompts to encourage the resident to participate in daily activities, as well as provide natural praise for his attendance.

**Strengths and Limitations**

One of the strengths of the current study was the use of an ABAB reversal design. Since a change was seen in the resident’s behaviour between the baseline and intervention phases, this could indicate a cause-effect relationship between the use of prompts and praise and increasing participation in recreational activities. A limitation to this study is that significance was not tested for. Further research could eliminate other variables and test for significance.

A potential limitation of this study is the daily scheduled activities. The resident may have had a preference in activities and therefore may have been more likely to participate in certain activities over others. If the resident preferred to participate in only certain activities, this would make it unclear as to how much of the effect was a result of the intervention or the activity itself.

It should also be noted that the current study used a single-subject research design, and therefore the results may not be the same across subjects.
**Multilevel Challenges to Program Implementation**

When working in the field of gerontology, there are many challenges to overcome. Challenges that were faced occurred on a multilevel system, which include the client level, the program level, the organizational level, and the societal level.

*Client Level*

At the client level, a challenge that was encountered was the resident appearing unmotivated to participate in daily activities and seemingly disinterested. This made it difficult to encourage the resident to come to the activities that he did not appear to have an interest in.

*Program Level*

At the program level, a general challenge was working within the population of geriatrics with Alzheimer’s disease. When implementing the behavioural intervention, various communication difficulties were encountered. Some of these difficulties were memory impairment, disorganized thoughts, and word or speech that was difficult to understand. It was difficult to know whether or not the resident understood the purpose of the behavioural intervention.

*Organizational Level*

At the organizational level, one challenge was the staff to resident ratio. There is only one recreational staff member on each floor of the long-term care facility and over 50 residents on each floor. It was difficult to spend individual time with the residents on a daily basis. The staff to resident ratio also made it very difficult to learn clients’ names and to monitor their behaviour and their daily activities.

*Societal Level*

There are often many societal level challenges when working in the field of dementia. The many myths about Alzheimer’s disease, for example, what it is, who gets it, and how it affects people, can increase the stigmas attached to the disease. These myths make it difficult for individuals with no knowledge of the disease to understand or help people with it.

**Contributions to the Field of Behavioural Psychology**

Research has previously shown that the use of prompts and praise are an effective behavioural intervention technique to increase engagement in activities (Engelman, Altus, and Mathews, 1999; Thompson and Born, 1999; McClannahan and Risley, 1975). The current study joins the growing research in behavioural interventions to maintain behaviour in the geriatric population by examining the use of verbal, gestural, and physical prompts paired with behaviour specific praise. The results of this investigation add to the field of behavioural psychology by providing empirical information that the use of response prompts paired with behaviour specific praise are effective behavioural techniques to promote participation in recreational programs. The current study demonstrates that the use of prompts and praise can play a significant role in increasing the frequency and duration of participation in recreational activities, and may have an effect on mood.
Recommendations for Future Research

Among individuals with Alzheimer’s disease, the relationship between participation in daily activities and a sense of personal well-being is subjective and complex. In this study, the resident’s mood was assessed secondarily, and although an increase was seen in the rating of his mood, it cannot be said that this was directly caused by participation in activities. Future research could use an experimental design that includes all phases of an intervention to determine the role that participation in recreational activities might have on increasing a positive mood. Future research could also expand on the research by examining the amount of positive mood experienced during different activities, and plan for recreational activities that generate a higher level of positive affect.

Future research could also do a controlled presentation to collect and report data on the type of prompt that was most effective to engage a resident in participation. Research could also include latency recording, and present data on the length of time from the delivery of each prompt to the actual beginning of participation.

Although many cognitive and social skills are lost as Alzheimer’s disease progresses, it is important to focus on the capabilities the individual maintains. Throughout the progression of Alzheimer’s disease, participation in structured recreational activities can play a critical role in improving the social, emotional, and physical aspects of life for residents in long-term care facilities. By participating more frequently in activities provided in long-term care facilities, residents may gain a stronger interest in activities, develop social relationships, and have an overall improvement in their mood.
References


Word Count

Literature Review Word Count: 3, 710

Overall Thesis Word Count: 9, 340
Appendix A: Consent Form

STUDENT: Kelsey Humphrey
COLLEGE SUPERVISOR: Lana Di Fazio

Dear [Partner Name],

I am a student in my 4th year in the Behavioural Psychology degree program at St. Lawrence College and I am currently on placement at Providence Manor. As a part of this placement, I am completing a special project called an applied thesis and am asking for your partner’s assistance to help me complete this project. The information in this form is intended to help you understand my project so that you can decide whether or not you want your partner to participate. Please read the information below carefully and feel free to ask me any outstanding questions you might have before deciding whether or not to participate.

WHAT IS THE PURPOSE OF THE STUDY?
Through my project “Increasing Participation in Activities with a Resident of an Alzheimer’s Unit in a Long-Term Care Facility, and the Effect on Mood”, I would like to promote and encourage your partner to participate more frequently in the activities that are provided at Providence Manor. I would also like to observe if encouraging your partner to participate in activities has an effect on his mood.

WHAT WILL YOU AND YOUR PARTNER NEED TO DO IF YOU TAKE PART?
If you agree for your partner to participate in this program, I will be making frequent contact with him to encourage him attend more of the activities provided at the residence. Promoting your partner to participate in activities will involve verbal encouragement, gestures, and guidance towards the activity. Your partner will be asked to complete a self-evaluation picture scale to describe his mood before and after each scheduled activity. If you agree for your partner to take part in this study, it is hopeful that participation in daily activities will increase, and his mood will improve.

WHAT ARE THE POTENTIAL BENEFITS TO YOUR PARTNER?
The benefits of this study are not guaranteed, but it is hoped that by promoting your partner to engage in daily activities, he will participate more frequently or for longer periods of time. Participation in activities promotes more social interactions, and could have other valuable emotional and physical benefits. Potential benefits of participating in this project also include you and your partner learning more about his mood and his level of engagement in activity.

WHAT ARE THE POSSIBLE DISADVANTAGES AND RISKS OF TAKING PART?
The risks of participating in this project are minimal but may include your partner becoming tired or...
bored from participating in various activities, or becoming irritated by the frequent contact I will have with him.

**WHAT HAPPENS IF SOMETHING GOES WRONG?**
If your partner does express any concerns from participating in more activities, you or your partner may talk to me or my supervisor. If you do decide for your partner to become involved and later change your mind, you are free to withdraw at any time.

**WILL YOUR PARTNER’S INVOLVEMENT IN THIS PROJECT BE KEPT PRIVATE?**
Data will be collected at the agency in a designated private room with only the student researcher and onsite supervisor present. Outside of the agency, all of the information will be coded (no real names will be used), and stored on a computer secured with a password. All information will be stored for a minimum of seven years, as per research requirements in Ontario, and any identifying information will be kept strictly confidential, unless required by law. No identifying information will appear on any of the written data or questionnaires. You will also not be identified by name in any reports, publications, or presentations resulting from this project.

**DOES YOUR PARTNER HAVE TO TAKE PART?**
It is up to you to decide whether or not your partner will take part. If you do decide for your partner to take part, you will be asked to sign this consent form. If you change your mind about participating, your partner is free to withdraw at any time, without giving any reason, and without incurring any penalty.

**CONTACT FOR FURTHER INFORMATION.**
This project has been approved by the Research Ethics Board at St. Lawrence College. The project will be developed under the supervision of Lana Di Fazio, my supervisor from St. Lawrence College. I really appreciate your cooperation. If you have any additional questions or concerns, feel free to ask me, Kelsey Humphrey, or you can contact my College Supervisor, Lana Di Fazio, at (613) 536-6215. You may also contact the Research Ethics Board at appliedresearch@sl.on.ca.

**CONSENT**
If you agree for your partner to participate in the project, please complete the following form and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. An additional copy of your consent will be retained for a minimum of seven years, as per research requirements in Ontario, at the agency and in a secure location with the Research Ethics Board at St. Lawrence College.
CONSENT

By signing this form, I __________________________, being the legally authorized consent giver for ______________________, understand and agree that:

- The study has been explained to me.
- All my questions were answered.
- Possible harm and discomforts and possible benefits (if any) of this study have been explained to me.
- I understand that I have the right not to participate and the right to stop at any time.
- I am free now, and in the future, to ask any questions about the study.
- I have been told that my personal information will be kept confidential.
- I understand that no information that would identify me will be released or printed without asking me first.
- I understand that I will receive a signed copy of this consent form.

I hereby consent to participate.

Participant/Parent/Guardian Printed Name: ________________________________

Signature: ____________________________  Date: ________

SLC Student: Kelsey Humphrey  Date: ________

Signature: ____________________________
Appendix B: Adapted Functional Assessment Checklist for Teachers and Staff

(FACTS-Part A)

Resident: ______________________________             Date: ____________________________
Interviewer: ____________________________            Respondent(s): ____________________

Please Identify 3 strengths the resident has that could be useful when working with them:
- 
- 
- 

Problem Behaviour(s): Identify problem behaviours

<table>
<thead>
<tr>
<th>Physical Aggression</th>
<th>Disruptive</th>
<th>Withdrawn</th>
<th>Unresponsive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inappropriate Language</td>
<td>No interest in activities</td>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

Please describe any other behaviours the resident exhibits here:

<table>
<thead>
<tr>
<th>Schedule (Times)</th>
<th>Likelihood of Problem Behaviour</th>
<th>Specific Problem Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wake</td>
<td>Low</td>
<td>1 2 3 4 5 6 High</td>
</tr>
<tr>
<td>Morning routines</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>Breakfast</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>After breakfast</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>Lunch</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>After Lunch</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>Dinner</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>After dinner</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>Evening routines</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>

Select 1-3 Routines for further assessment: Select routines based on (a) similarity of activities (conditions) with ratings of 4, 5 or 6 and (b) similarity of problem behaviour(s). Complete the FACTS-Part B for each routine identified.
Adapted Functional Assessment Checklist for Teachers & Staff (FACTS-Part B)

Resident: ____________________________ Date: ______________________________________
Interviewer: _______________________________ Respondent(s): ______________________________

Routine/Activities/Context:
Which routine (only one) from the FACTS-Part A is assessed?  

<table>
<thead>
<tr>
<th>Problem Behaviour(s)</th>
</tr>
</thead>
</table>

Provide more detail about the problem behaviour(s):
What does the problem behaviour(s) look like?

How often does the problem behaviour(s) occur?

How long does the problem behaviour(s) last when it does occur?

What are the events that predict when the problem behaviour(s) will occur? (Predictors) Related Issues (setting events)

<table>
<thead>
<tr>
<th>Environmental Features</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Setting Events &amp; Predictors</th>
<th>Problem Behaviour(s)</th>
<th>Maintaining Consequence(s)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>What consequences appear most likely to maintain the problem behaviour(s)? Things that are Obtained</th>
<th>Things Avoided or Escaped From</th>
</tr>
</thead>
</table>

| SUMMARY OF BEHAVIOUR |

<table>
<thead>
<tr>
<th>Setting Events &amp; Predictors</th>
<th>Problem Behaviour(s)</th>
<th>Maintaining Consequence(s)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>How accurate is the Summary of Behaviour?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not very accurate</td>
</tr>
<tr>
<td>Very Accurate</td>
</tr>
<tr>
<td>1  2  3  4  5  6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What current techniques are being used to handle the behaviour?</th>
<th>Strategies for responding to problem behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule change ____</td>
<td></td>
</tr>
<tr>
<td>None ____</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from March, Horner, Lewis-Palmer, Brown, Crone, Todd, & Carr (2000)

Appendix C: Self-Evaluation Picture Scale

How am I feeling?

Scoring the self-evaluation

😊 = 4 points
😊 = 3 points
😊 = 2 points
😢 = 1 point
Appendix D: Interview with the Recreational Therapist of the Alzheimer’s Unit using an Adapted FACTS Interview

Functional Assessment Checklist for Teachers and Staff (FACTS-Part A)

Resident: 
Interviewer: Keiley Humphrey 
Date: Oct 19 2010 
Respondent(s): Recreationist

Please identify 3 strengths the resident has that could be useful when working with them:
- expressed interest in certain programs + art, music, H talks
- very polite + friendly

Problem Behaviour(s): Identify problem behaviours

<table>
<thead>
<tr>
<th>Physical Aggression</th>
<th>Disruptive</th>
<th>Withdrawn</th>
<th>Unresponsive</th>
</tr>
</thead>
<tbody>
<tr>
<td>_</td>
<td></td>
<td>_</td>
<td></td>
</tr>
</tbody>
</table>

Inappropriate Language | No interest in activities | Other: |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>_</td>
<td>_</td>
<td></td>
</tr>
</tbody>
</table>

Please describe any other behaviours the resident exhibits here: Anxiety in larger crowds

<table>
<thead>
<tr>
<th>Schedule (Times)</th>
<th>Likelihood of Problem Behaviour</th>
<th>Specific Problem Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wake</td>
<td>Low 1 2 3 4 5 6</td>
<td>High 5 6 → very late sleeper, typically</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morning routines</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>Breakfast</td>
<td>1 2 3 4 5 6</td>
<td>leaves frequently</td>
</tr>
<tr>
<td>After breakfast</td>
<td>1 2 3 4 5 6</td>
<td>leaves frequently</td>
</tr>
<tr>
<td>Lunch</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>After Lunch</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>Dinner</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>After dinner</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>Evening routines</td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>

Select 1-3 Routines for further assessment: Select routines based on (a) similarity of activities (conditions) with ratings of 4, 5 or 6 and (b) similarity of problem behaviour(s). Complete the FACTS-Part B for each routine identified.
Functional Assessment Checklist for Teachers & Staff (FACTS-Part B)

Resident: ____________________ Date: ____________________

Interviewer: ____________________ Respondent(s): ____________________

Routine/Activities/Context:
Which routine (only one) from the FACTS-Part A is assessed? After Lunch (Activity Time)

<table>
<thead>
<tr>
<th>Problem Behaviour(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawn / Anxiety in larger crowds</td>
</tr>
</tbody>
</table>

Provide more detail about the problem behaviour(s):
What does the problem behaviour(s) look like? Sometimes says no, or "I don't think I should." I don't know if that is a good idea, etc when invited to programs. Sometimes will say yes, then change his mind when walking to program. Sometimes "comes to program, then leaves after a few minutes." Every time asked to attend a program.

How often does the problem behaviour(s) occur?
Varies depending on his response. 3-5 minutes. 5-10 minutes.

What are the events that predict when the problem behaviour(s) will occur? (Predictors) Related Issues (setting events)

<table>
<thead>
<tr>
<th>Illness</th>
<th>Other: ________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Negative social interaction</td>
</tr>
<tr>
<td>Yes</td>
<td>Afternoon activity</td>
</tr>
</tbody>
</table>

Environmental Features

<table>
<thead>
<tr>
<th>Structured activity</th>
<th>Activity too long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical demands</td>
<td>Unstructured time</td>
</tr>
<tr>
<td>Alone</td>
<td>Tasks too boring</td>
</tr>
<tr>
<td>Tasks too difficult</td>
<td>Other: Larger groups of people</td>
</tr>
</tbody>
</table>

What consequences appear most likely to maintain the problem behaviour(s)? Things that are Obtained

<table>
<thead>
<tr>
<th>Attention</th>
<th>Other: ________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Preferred activity</td>
</tr>
</tbody>
</table>

Things Avoided or Escaped From

<table>
<thead>
<tr>
<th>Hard tasks</th>
<th>Other: Feelings of anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social interactions</td>
<td>Negatives</td>
</tr>
<tr>
<td>Physical effort</td>
<td>Other: From crowds</td>
</tr>
</tbody>
</table>

SUMMARY OF BEHAVIOUR

<table>
<thead>
<tr>
<th>Setting Events &amp; Predictors</th>
<th>Problem Behaviour(s)</th>
<th>Maintaining Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afternoon Activity, where he fears having negative social interactions with others.</td>
<td>Not going to any programs / Leaving early (Withdrawn) / Anxiety from groups</td>
<td>Avoiding groups, attention from people, negative in groups, social interaction</td>
</tr>
</tbody>
</table>

How accurate is the Summary of Behaviour?
Not very accurate
1 2 3 4 5 Very Accurate 6

What current techniques are being used to handle the behaviour?
Schedule change ________
None ________ Other: ________

Strategies for responding to problem behaviour
- Never force him to stay
- Be friendly, say thank you for coming, hope to see you again. "I hope you enjoy yourself."

Adapted from March, Horner, Lewis-Palmer, Brown, Crone, Todd, & Carr (2000)
Appendix E: Interview with a Registered Practical Nurse using an adapted FACTS Interview

Functional Assessment Checklist for Teachers and Staff (FACTS-Part A)

Resident:  
Interviewer: Kelsey Humphrey  
Date: Oct 19/10  
Respondent(s): RPN

Please identify 3 strengths the resident has that could be useful when working with them:
- Friendly, calm voice
- Loves conversation (loves being spoken to)

Problem Behaviour(s): Identify problem behaviours

- Physical Aggression
- Disruptive
- Withdrawn
- Inappropriate Language
- No interest in activities
- Unresponsive
- Other:

Please describe any other behaviours the resident exhibits here:

- Anxiety to loud noise
- Becomes frustrated when too many questions asked
- Sleeps in every morning
- Eats late, needs staff to feed
- Leaves frequently
- Goes to bed early

Schedule (Times) | Likelihood of Problem Behaviour | Specific Problem Behaviour
--- | --- | ---
Wake | Low 1 2 3 4 | High 5 6
Morning routines | 1 2 3 4 | 5 6
Breakfast | 1 2 3 4 | 5 6
After breakfast | 1 2 3 4 | 5 6
Lunch | 1 2 3 4 | 5 6
After Lunch | 1 2 3 4 | 5 6
Dinner | 1 2 3 4 | 5 6
After dinner | 1 2 3 4 | 5 6
Evening routines | 1 2 3 4 | 5 6

Select 1-3 Routines for further assessment: Select routines based on (a) similarity of activities (conditions) with ratings of 4, 5 or 6 and (b) similarity of problem behaviour(s). Complete the FACTS-Part B for each routine identified.
Functional Assessment Checklist for Teachers & Staff (FACTS-Part B)

Resident: ___________________________ Date: ___________________________
Interviewer: ___________________________ Respondent(s): ___________________________

Routine/Activities/Context:
Which routine (only one) from the FACTS-Part A is assessed?

<table>
<thead>
<tr>
<th>Problem Behaviour(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety in loud crowds/noise</td>
</tr>
</tbody>
</table>

Provide more detail about the problem behaviour(s):

What does the problem behaviour(s) look like?
- Resident responds that he is not sure if he wants to attend activity or meal time.
- When asking resident to come for meals or any activities, if anxious he will sit alone in his room.

How often does the problem behaviour(s) occur?
- If attending program 5-10 minutes will leave.
- If coming to dining room for meals it's better one staff sits with resident if anxious. If to anxious will sit alone in his room.

How long does the problem behaviour(s) last when it does occur?
- Structured activity
- Physical demands
- Alone
- Tasks too difficult
- Other: Loud noise, Large crowds.

What are the events that predict when the problem behaviour(s) will occur? (Predictors) Related Issues (setting events) Environmental Features

<table>
<thead>
<tr>
<th>Setting Events &amp; Predictors</th>
<th>Problem Behaviour(s)</th>
<th>Maintaining Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>afternoon activity</td>
<td>Anxiety</td>
<td>Avoiding loud noise &amp; large crowds</td>
</tr>
<tr>
<td></td>
<td>Frustration</td>
<td></td>
</tr>
</tbody>
</table>

What consequences appear most likely to maintain the problem behaviour(s)? Things that are Obtained Things Avoided or Escaped From

<table>
<thead>
<tr>
<th>attention</th>
<th>Other: hard tasks</th>
<th>Other:</th>
</tr>
</thead>
<tbody>
<tr>
<td>preferred activity</td>
<td>social interactions</td>
<td></td>
</tr>
<tr>
<td>social isolation</td>
<td>negatives</td>
<td>-anything that would give resident anxiety.</td>
</tr>
<tr>
<td></td>
<td>physical effort</td>
<td></td>
</tr>
<tr>
<td></td>
<td>attention</td>
<td></td>
</tr>
</tbody>
</table>

SUMMARY OF BEHAVIOUR

How accurate is the Summary of Behaviour?
Not very accurate: 1 2 3 4 5 Very Accurate 6

What current techniques are being used to handle the behaviour?
Schedule change: None
Other: - Don't push resident to attend activity as will become frustrated, becoming agitated.

Adapted from March, Horner, Lewis-Palmer, Brown, Crone, Todd, & Carr (2000)
## Appendix F: Raw Baseline Data of Participation in Activities

<table>
<thead>
<tr>
<th>Date</th>
<th>Length of Time of Activity</th>
<th>Time Participation Began</th>
<th>Time Participation Ended</th>
<th>Duration of Participation</th>
<th>% of Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 13, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>September 14, 2010</td>
<td>45 minutes</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>September 16, 2010</td>
<td>1 hour, 15 minutes</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>September 17, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>September 21, 2010</td>
<td>1 hour</td>
<td>2:45</td>
<td>2:53</td>
<td>7 minutes</td>
<td>11.6%</td>
</tr>
<tr>
<td>September 23, 2010</td>
<td>1 hour, 30 minutes</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>September 24, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>September 28, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>September 29, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>October 1, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>October 4, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>October 5, 2010</td>
<td>1 hour, 15 minutes</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>October 7, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>October 12, 2010</td>
<td>1 hour</td>
<td>2:45</td>
<td>2:51</td>
<td>6 minutes</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
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<td>----------</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 14, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
<tr>
<td>October 15, 2010</td>
<td>1 hour</td>
<td>Did not participate</td>
<td>Did not participate</td>
<td>0 minutes</td>
<td>0%</td>
</tr>
</tbody>
</table>
# Appendix G: Baseline Phase 1 Summary Statistics

<table>
<thead>
<tr>
<th></th>
<th>Baseline Phase 1 of Participation in Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>10.08%</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Standard Deviation</strong></td>
<td>10.43</td>
</tr>
</tbody>
</table>
Appendix H: Rating of Mood Pre- and Post- Activity: Intervention Phase 1

![Bar chart showing mood scale ratings](image-url)
Appendix I: Rating of Mood Pre- and Post- Activity: Baseline Phase 2
Appendix J: Rating of Mood Pre- and Post- Activity: Intervention Phase 2
# Appendix K: Raw Data of Mood Rating

<table>
<thead>
<tr>
<th>Rating of Mood Before Activity</th>
<th>Rating of Mood After Activity</th>
<th>Did Participation Occur?</th>
<th>Difference in Rating of Mood Using a 4-point Likert Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention Phase 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Yes</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Yes</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>Yes</td>
<td>+2</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td><strong>Mean Rating of Mood Before Activity: 1.9</strong></td>
<td><strong>Mean Rating of Mood After Activity: 2.7</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Baseline Phase 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>No</td>
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</tr>
<tr>
<td>2</td>
<td>1</td>
<td>No</td>
<td>-1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td><strong>Mean Rating of Mood Before Activity: 1.8</strong></td>
<td><strong>Mean Rating of Mood After Activity: 1.6</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intervention Phase 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Yes</td>
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<tr>
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<td>4</td>
<td>Yes</td>
<td>+2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Yes</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>Yes</td>
<td>+2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Yes</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Yes</td>
<td>+1</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>Yes</td>
<td>+2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Yes</td>
<td>0</td>
</tr>
<tr>
<td><strong>Mean Rating of Mood Before Activity: 1.8</strong></td>
<td><strong>Mean Rating of Mood After Activity: 2.9</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix L: Mediator Instructions for Intervention Procedures

**CLIENT NAME:**

**PROCEDURE:** Verbal, gestural, and physical prompts paired with behaviour-specific praise

**MEDIATOR(S):**

**LOCATION:** Alzheimer’s unit of a long-term care facility

**TARGET BEHAVIOUR(S) (operational definitions):**

1. **Participation in activities:** Participation will be said to be occurring any time the resident is engaged in any type of recreational activity. Participation can include almost any form of appropriate behaviour including listening to music, interacting with staff or other residents outside of his room, and involvement in various psychomotor activities such as games and songs, or engaging with equipment or materials. Participation will not be occurring if the resident is laying in bed while engaging in a passive activity, such as listening to music.

<table>
<thead>
<tr>
<th>STEPS: (key words)</th>
<th>(Clear description of each step)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Verbal Prompts</strong></td>
<td>Verbal prompts will consist of reminders (e.g., “There is music in the auditorium today”), questions (e.g., “Would you like to come to arts and crafts?”), and other verbal assistance (e.g., “I think you would really enjoy this activity”). After verbally prompting the resident a minimum of three times, gestural prompts should be used.</td>
</tr>
<tr>
<td><strong>2. Gestural Prompts</strong></td>
<td>Gestural or modeling prompts should be used (e.g., pointing towards the activity), and walking towards the entrance of the resident’s room while still using verbal prompts (e.g., “I think you would really enjoy this activity”).</td>
</tr>
<tr>
<td><strong>3. Physical Prompts</strong></td>
<td>Physical prompts consist of gentle physical guidance which involve taking the resident’s hand and redirecting him towards the scheduled activity, while still using verbal prompts (e.g., “let’s go to music for a little while, it will be fun!”).</td>
</tr>
<tr>
<td><strong>4. Praise</strong></td>
<td>Behaviour specific praise and positive phrases (e.g., “Excellent” or “you are doing a great job painting inside the lines”) should be provided to for participation in activity, and thanking the resident for coming to an activity.</td>
</tr>
</tbody>
</table>