

Mental Health Maintenance: Psychiatric Occupational Therapy

for a Participant in the NASA 12 Week Bedrest Study

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Note: This document describes a Capstone Dissemination project reflecting an individually planned experience conducted under faculty and site mentorship. The goal of the Capstone Experience is to provide occupational therapy doctoral students with unique experiences whereby they can demonstrate leadership and autonomous decision-making in preparation for enhanced future practice as occupational therapists. As such, the Capstone Dissemination is not formal research.

### Abstract

In this case study, a client participating in the NASA 12 week simulated antigravity bedrest study worked with a psychiatric occupational therapy student to maintain mental health and prevent decompensation. The participant, Mr. P, was required to remain horizontal at all times during the study and his occupational options were limited to those he could complete in this position without any resistance. The psychiatric occupational therapy student assisted Mr. P in identifying personal goals on which he wanted to focus during the 12 weeks he was restricted to bedrest, and the psychiatric occupational therapy student also assisted him in relaxation and coping skills by presenting relaxing occupations. In this case study Mr. P completed a gardening occupation that allowed him and the student occupational therapist an opportunity to gain some insight into the challenge of lying down for 12 weeks and coping with a loss of control. Mr. P identified occupations that were out of his control, and also identified ways to cope with his frustration, including self-distraction and visualization. This occupational therapy case study may be illustrative of the approach one might find effective when working to maintain mental health in a healthy individual who must be in a potentially decompensatory situation such as the NASA bedrest study.

## Introduction

### *The Client*

Mr. P is 29 years of age, healthy and well, participating in the NASA 12 week simulated antigravity bed rest study (Cavanaugh, 2008). The patient's head is at a six degree decline from horizontal at all times. He must stay in a supine, prone, or side-lying position for twelve weeks, necessitating hygiene and meal preparation assistance from nursing personnel. Because he is in the experimental group of the study, his schedule includes five hours of exercise per week on a treadmill that is hanging against a wall. He is hung from a suspension system horizontally during this time, as are all participants in the study, but experimental group subjects like Mr. P are allowed to exercise. Mr. P is not allowed to perform any resistive exercises beyond the five hours of exercise allotted, but is provided by physical therapy a list of stretches to complete in bed.

### *The Model of Practice*

The Model of Human Occupation (Kielhofner, 2002) is based upon the concept that an individual performs occupations based on volition (personal causation, values, and interests), habits (behavior patterns and roles), and physical abilities. The Model of Human Occupation focuses on the story of a person's life, and its trajectory into the future. Adaptation in the Model of Human Occupation is viewed as non-linear and occurs in a gestalt moment; the individual spontaneously organizes different elements into an improvised whole action.

### *Model of Practice Rationale and Evidence*

The Model of Human Occupation was chosen because of a dedication to evidence based practice in mental health settings. Over 80 studies have been completed

investigating the Model of Human Occupation theory and practice (Kielhofner, 2002) including investigations regarding development of measures and evidence generation about the concepts (Mallinson, Mahaffey, & Kielhofner, 1998; Doble, 1991, Pan & Fisher, 1994; Oakley, Kielhofner, Barris & Reichler, 1986). Correlations were found between the Model of Human Occupation concepts such as the positive relationship between volition and patterns of occupation (Neville-Jan, 1994) and the positive relationship between personal causation and engagement (Peterson et al., 1999). Comparative studies found that people with cognitive and psychosocial impairments differed in their presentation of variables derived from the Model of Human Occupation concepts from people without impairments (Dickerson & Oakley, 1995; Ebb, Coster, & Duncombe, 1989; Lederer, Kielhofner, & Watts, 1985; Barris, Dickie, & Baron, 1988; Barris, Kielhofner, Burch, Gelinis, Klement, & Schultz, 1986; Davies Hallet, Zasler, Maurer, & Cash, 1994). Henry found that occupational adaptation existing in high levels after the first psychotic episode of young adults predicted better psychosocial functioning six months later (1994). The Model of Human Occupation has been shown by these studies to effectively identify, measure, correlate, compare, and predict conceptual variables in psychiatric occupational therapy settings as well as with typical individuals.

### *Innovation and Creativity*

Mr. P was an atypical occupational therapy case, in that he was not experiencing a disease or disorder, but was a healthy person participating in a study of the effects of twelve weeks uninterrupted bed rest. The head of the bed was set at a six degree decline compared to horizontal (180 degrees). These conditions simulated zero gravity, for use in space travel. The purpose of this ongoing study was to improve equipment and fitness

programs used in space to counter the effects of prolonged weightlessness and also to gauge the return of muscle and bone density upon return to Earth. Being in the experimental group, this participant used a device, which is known as the Standalone Zero Gravity Locomotion Simulator (sZLS), three times a week, that provided proprioception and the opportunity to perform loaded cardiovascular exercise, while maintaining a simulated gravity free state. This project uses the treadmill to develop improved exercise routines for astronauts during spaceflight. Each participant is provided exercise programs after the study to rebuild muscle and bone.

The weightless conditions in zero gravity environments can lead to aerobic deconditioning, as well as muscle atrophy and bone loss - all of which can affect astronauts' ability to perform their best. Typically, participants can experience a range of physical and mental changes after twelve weeks of bed rest, including depressive symptoms such as fatigue. The presentation of physical and mental changes experienced by participants may vary according to personal predispositions to stress. In this case, psychiatric occupational therapy is provided with the purpose of enhancement and/or maintenance of coping skills, with the ultimate goal that the participant successfully completes the 12 week study. These conditions are unique in many ways within the field of occupational therapy. The goal is not to remediate a deficit, but instead to maintain mental wellness while under extreme stress conditions. The participant is not a patient, and has no disease, but must adjust to the conditions of simulated zero gravity and extended bedrest. This condition is quite rare within the field of occupational therapy, but may become more common as space travel and colonization efforts progress, as well as expansion of occupational therapy's role in wellness promotion.

One particularly relevant aspect of this study to psychiatric occupational therapy is the grief related to the loss of ability to care for oneself, and lack of participation in leisure and recreational occupations such as travel and sports. The occupation of work is embedded within the study, as participants are paid \$12,000 in increments of \$1,000 per week. Daytime schedules are filled with exercise and personnel taking tissue samples for evaluation of muscle and bone loss. Educational goals may also be completed during this study, as the participant is provided a laptop and internet access to use for this purpose, as well as recreation. Participants are encouraged to use this equipment to set up a blog on the internet. Participants must depend on healthcare professionals to provide bedpans, set up baths, and provide occupation materials. Psychiatric occupational therapy sessions are held twice a week, for thirty minutes each.

## Evaluation

### *Client History*

Mr. P is a healthy Caucasian male with no prior medical, psychiatric, or surgical history. Mr. P entered the study by responding to an ad on [www.craigslist.com](http://www.craigslist.com). He is currently employed as a Dresser in theatre productions, meaning he helps actors get dressed before performances. This work is intermittent; necessitating supplementation with others jobs such as work repairing tanning beds. Mr. P earned a Bachelor of Arts in Theatre a few years ago, but currently expresses interest in pursuing a different profession as a personal trainer. He lives with his father in a suburb of the Midwest. His mother also lives in the same city, and Mr. P maintains close relationships with both of them, as well as his sister and her family who live in a nearby city. Mr. P states that he has many close friendships with people who live nearby, but romantically is single.

### *Standardized Model of Practice Assessments*

All of the following assessments were standardized for validity and reliability (Kielhofner, 2002). Mr. P completed the Role Checklist (Oakley, 1982). His Role Checklist results may be viewed in Appendix A. Mr. P identified student, worker, volunteer, caregiver, home maintainer, friend, family member, and group member as present roles. He saw all of those roles as valuable, especially friend, family member, caregiver, worker, and student. Mr. P completed the Assessment of Occupational Functioning-Collaborative Version (AOF-CV) (Watts & Madigan, 1993). A copy of the AOF-CV may be viewed in Appendix B. Using this extensive questionnaire; Mr. P answered questions about his interests, habits, values, roles, and abilities. As is expected for a healthy individual, Mr. P was rated by the therapist as moderately to very highly demonstrating proficiency in these areas. Mr. P also completed the Occupational Questionnaire (Smith et al., 1986). A copy of the Occupational Questionnaire may be viewed in Appendix C. Mr. P used this assessment to describe his daily schedule, starting at 8:00 am and ending at 11:00 pm. Finally, Mr. P completed the Modified Interest Checklist (Kielhofner & Neville, 1983), by indicating some of his interests on an extensive list of possible occupations. A copy of the Modified Interest Checklist may be viewed in Appendix D.

### *Informal and Modified Assessments*

Mr. P completed the Canadian Occupational Performance Measure (COPM) (Law et al., 1994) informally to help him prioritize his many goals. Similar assessments within the Model of Human Occupation such as the Occupational Self Assessment (OSA) (Baron et al., 2002) referred specifically to inapplicable occupations such as caring for

one's home and food management. His complete COPM results may be viewed in Appendix E. In descending order, Mr. P identified finding a fulfilling job, moving into his own place, creating a better budget, and studying to be a personal trainer as his four most important goals. These goals can be presented as one part of the Occupational Self-Assessment, called Planning and Implementing Occupational Therapy Services: Long Term Goal/Short Term Goals, while avoiding that part of the assessment that is inapplicable to Mr. P's situation. A copy of the Occupational Self Assessment (OSA) Planning and Implementing Occupational Therapy Services: Long Term Goal/Short Term Goals may be viewed in Appendix F. Mr. P worked with the occupational therapist to develop appropriate short term goals to help him reach his long term goals identified above.

#### *Client Occupational Performance*

Using the COPM (Law et al., 1994), Mr. P prioritized desired skills, and chose to focus on finding a fulfilling job, moving into his own apartment, creating a better budget, and studying for preparation of his personal trainer education. This process helped the occupational therapy student and Mr. P to derive the long term goals for the OSA Long Term Goal/Short Term Goals assessment (Baron et al., 2002). Mr. P used the Role Checklist (Oakley, 1982) to identify his very valued roles as student, worker, caregiver, friend, and family member. Mr. P used the AOF-CV (Watts & Madigan, 1993) to explore his roles, habits, values, and volition. As expected, he rated as a typical healthy person would, demonstrating balance in his expression of these Model of Human Occupation constructs. He expressed strong volition to participate in the current study, and also to become a personal trainer. Helping others emerged as an important value of Mr. P's. He



also explored his current habit of remaining horizontal at all times. The Modified Interest Checklist (Kielhofner & Neville, 1983) shed some light on some Mr. P's personal interests, including: cooking, baking, and gardening, as well as listening to music, driving, and walking. Using the Occupational Questionnaire (Smith et al., 1986), Mr. P conveyed the structured nature of his days, filled with required testing and exercise, self-care, and occasional free time. The occupational therapy student observed Mr. P's full affect and generally euthymic mood during each session. In informal evaluation, Mr. P discussed his disappointment regarding failure to follow-through on previous goals, due to a lack of planning. He stated however, "I like to be productive." Mr. P also expressed a desire to please others, even at the expense of meeting his personal goals.

### Goal Setting

#### *Client's Goals*

#### *Short Term Goals*

- 1) Mr. P will independently initiate internet and phone contact with a local personal training school after one week of occupational therapy in preparation for attending school after discharge.
- 2) Mr. P will independently identify resources to review in preparation for a career in personal training after two weeks of occupational therapy.
- 3) Mr. P will identify resources to review in preparation for moving to a new apartment with minimal assistance after two weeks of occupational therapy.
- 4) Mr. P will identify expenses and income to be included in his budget during the first two weeks of occupational therapy with minimal assistance to prepare for gaining financial independence from his father after discharge.

*Long Term Goals*

- 1) Mr. P will self-report his independent plan of an education schedule for the next two years by discharge.
- 2) Mr. P will self-report his independent review of self-identified resources in preparation for a career in personal training by discharge.
- 3) Mr. P will self-report his independent review of resources in preparation for moving to a new apartment by discharge.
- 4) Mr. P will create his budget for the next year with minimal assistance during psychiatric occupational therapy by discharge.

*Occupational Therapy Goals for all NASA Bedrest Study Participants*

*Short Term Goals*

- 1) Mr. P will state understanding of relaxation techniques with minimal assistance after two weeks of psychiatric occupational therapy to prepare for independent coping with frustration related to extended bedrest.
- 2) Mr. P will successfully identify the difference between positive and negative copers, after two weeks of psychiatric occupational therapy.
- 3) Mr. P will identify personal goals to be completed while on bed rest within two weeks of psychiatric occupational therapy.
- 4) Mr. P will discuss his interest in meeting the goals of the NASA 12 week bedrest study within two weeks of psychiatric occupational therapy.

*Long Term Goals*

- 1) Mr. P will apply relaxation techniques with minimal assistance as needed during psychiatric occupational therapy to prevent decompensation and enable compliance with study demands.
- 2) Mr. P will demonstrate competence in utilizing positive copers independently during psychiatric occupational therapy to prevent decompensation and enable compliance with study demands.
- 3) Mr. P will continue to self-assess regarding his performance in self-identified goals weekly during occupational therapy to support his volition, habits, abilities, and roles as much as possible during his participation in the study.
- 4) Mr. P will independently participate in the program-based goals of the 12 week bedrest study, including avoiding resistive occupations and maintaining head six degrees below his body during occupational therapy sessions.

#### *Client Goal Justification*

Using the MOHO model of practice, a client's goals are based on personal habits, volition, abilities, and roles (Kielhofner, 2002). Mr. P values the roles of student, worker, friend and family member most according to the Role Checklist (Oakley, 1982). Mr. P's interests expressed using the aforementioned evaluations include successful participation in the study, preparing for personal training school, preparing to move into a new apartment, and creating a budget. His current occupation as a study participant is his most meaningful priority currently, as is reflected in his responses on MOHO evaluations. The level of purpose Mr. P has stated and demonstrated regarding completion of the study is high. The priority of psychiatric occupational therapy is to support Mr. P in his goal of completion of the NASA 12 week bedrest study, using relaxation and coping techniques.

*Interventions*

Occupational forms Mr. P encountered during occupational therapy sessions included: cookies and decorating supplies, a windowsill herb garden, a two year planner, a mask and decorating supplies, a business self-help book, verbal assertiveness training, a relaxation and visualization CD, an architecture stamping kit, and card-making supplies. All sessions occurred in Mr. P's hospital room, a ten foot by ten foot room, containing a five foot by three foot window. Mr. P lay on his left side during sessions, maintaining his head six degrees below his body.

*Therapeutic Occupation*

A particularly interesting occupation for Mr. P was his creation of a windowsill herb garden. Mr. P was presented with an herb garden kit, including: a half gallon sized pot, seed packets (oregano, basil, chives, and parsley), dehydrated soil pellets, and one liter of water.

## Notes

*Occupation Changes and Rationale*

Mr. P was required to remain lying horizontally; therefore a bedside table was made available within arm's reach. Hand wipes were available to Mr. P due to his inability to wash his hands in the sink. Discussion of recipes using the herbs was redirected into a discussion of the value of plant aromas, to distract Mr. P from his inability to choose food while participating in strict intake and output requirement of the study.

*Occupational Performances*

Mr. P read the directions, hydrated the soil pellets, shaped the soil, and planted the seeds. During participation in gardening, Mr. P initiated reminiscence about his family garden at home. He also discussed favorite recipes he created using the produce from his garden at home. With minimal verbal cuing, Mr. P discussed the value of plant aromas and the similarities between a seed's becoming a plant and his current participation in the study. Mr. P then chose the location of the garden in his room.

### *Inferred Meanings and Purposes*

Mr. P's meanings and purpose were high in this occupation, as evidenced by his self-initiation of planning the construction of the garden. His affect was full and he was euthymic while completing the steps of gardening. He smiled calmly while talking about his garden at home; sensations of fresh tomatoes, sunlight, and green leaves. Mr. P began to discuss dishes he enjoyed using produce from the garden, but demonstrated slight irritation with his lack of food options. He stated, "they give me Stouffer's to eat every day here. I don't get to cook, or even have a choice about what I get. I mean, I told them my preferences when I started, but sometimes I just have a craving for popcorn, or a cookie, or lasagna. You don't want to wait a week to eat something you're craving. They even pick out my clothes for me in the morning, without asking what I'd like to wear. Maybe I don't always want to match!" Mr. P's affect was calmer with the therapist's redirection to focus on the aroma the seeds currently being planted would provide in the future. Mr. P discussed with the therapist the meaning of seeds, and the symbolic nature of seeds growing into plants, representing hope. Mr. P expressed his feelings of determination and contribution to science through his participation in the bedrest study. His level of purpose was inferred from Mr. P's comments about looking forward to the

sense of accomplishment he expected to experience when he has full grown herb plants after he completes the study, and how that accomplishment might inspire his confidence in future occupations.

*Observation of occupational performance*

Mr. P is lacking in assertive communication skills, as evidenced by his clear irritation with his lack of options in his diet and dress without evidence of an ability to make requests of his physician and nurses, although he was able to verbally express his frustration to the occupational therapy student. Self redirection skills used by Mr. P are also necessary for successful coping in his occupational form, which is currently being perceived by him as controlled. He successfully completed the task of seed planting, as well as verbally acknowledging the value of gardening as a leisure occupation for relaxation purposes. Mr. P was able to discuss the concept of hope as it related to the seed planting occupation and to his current participation in the bedrest study.

*Compensations and/ or Adaptations*

Mr. P sublimates his frustration with living in a controlled occupational form by pushing the seeds into the soil. He is not allowed to perform resistive exercises, even if they are occupationally embedded, which previously was his habit for relieving tension. Instead, Mr. P expresses his feelings verbally, and distracts himself from his worries with the leisure occupation of gardening, to maintain the role of study participant.

*Re-synthesis*

Future occupations should be focused on planning for the future, including Mr. P's goal of preparing himself to be a personal trainer. Mr. P would use a two year planner to focus his attention on a future time, when present irritations of lack of choice will be

forgotten. Assertiveness training would be discussed in terms of communication with the personal training school, investigators of the study, and when conveying needs to family and friends. The purpose of this training would be to encourage Mr. P to seek options in the areas of his life which are not controlled. For instance, asking to pick out his own clothes would be an allowable alternative to having his clothes picked for him, and would allow Mr. P more of a choice in occupations of daily living. Talking about or preparing food would be avoided, as Mr. P may not have a daily choice regarding his food options, according to study protocol.

### Outcomes

#### *Intervention goals*

The intervention achieved the psychiatric occupational therapy goals that Mr. P would state understanding of relaxation and positive coping techniques. Mr. P's response to the occupational therapy student's request for a subject change from the taste of herbs to the smell of herbs reflected his understanding of the distraction method of coping, "it's better if I don't think too much about food...let's just talk about something else." His comment regarding the occupation served as evidence of understanding relaxation techniques, "That was very relaxing; it brought up lots of happy memories."

#### *Client changes on the standardized assessments*

Mr. P's assessments served to allow the occupational therapy student to understand his interests, roles, habits, and volition. These were all within a healthy range, and the expectation of psychiatric occupational therapy in this case was not to treat a psychiatric condition, but to maintain wellness and prevent mental problems during the 12 week bedrest study. Mr. P remained psychiatrically well, participated fully in the

study, with independent utilization of relaxation and coping techniques exemplified in the occupation described here.

### *Meanings and Purposes*

The meaning this client attributed to this intervention was inferred as highly meaningful, based on his description of his fondness for gardening, the positive affect exuded while relating childhood memories, and his verbal affirmation of the relaxing qualities of the occupation. Mr. P's level of purpose inferred from his performance was also highly purposeful, based on his self-initiated opening of packages and reading of directions. His high level of engagement in the conversation, as well as his high level of attention to maintaining a healthy cognitive structure while in a constricted occupational form, also attest to his purpose in performing this occupation.

### *Client Progress Report*

Mr. P discussed the progress he made on his self-identified goals. He reported a performance of 8/10 on the COPM for his apartment hunt, saying he had spent a lot of time online and talking to people on the phone about apartments. He reported a score of 6/10 on creating a budget, saying that, "I'll worry more about it when I know how much money I'll be making and spending during school." Mr. P gave his performance of setting educational goals an 8/10, having scheduled his classes in a planner. Mr. P finished reading a textbook and also a self-help book about personal and business communication also according to his schedule. Mr. P scored himself a 7/10 on his review of resources to "find a fulfilling job" and he continued to investigate aspects of his chosen career through online searches and self-directed study of anatomy and physiology. He enrolled in a personal training school one month after completion of the study. Mr. P maintained his



previous scores on the Modified Interest Checklist (Kielhofner & Neville, 1983), Role Checklist (Oakley, 1982), AOF-CV (Watts & Madigan, 1993) and Occupational Questionnaire (Smith et al., 1986) assessments.

#### *Client Self-Evaluation*

Mr. P expressed satisfaction with his progress on his goals, and states he will continue his performance in learning about personal training. Mr. P demonstrated competency and mastery of relaxation and coping techniques, as well as successful participation in the NASA 12 week bedrest study.

#### *Changes in Other Areas of Life*

Mr. P stated an increase in assertive communication about his need for choice in clothing, “even if it doesn’t match,” and in discussing food options with his nutritionist. He also applied coping skills, such as assertive communication techniques, in eliciting emotional support from family members and friends while participating in the study.

#### *Follow-up*

Mr. P emailed the occupational therapy student post-discharge about his ability to enjoy a cup of coffee and participate in yoga classes, occupations he had not been allowed to complete during participation in the study. He began attending personal training school one month after discharge, and is currently visiting the apartments he discovered online while in the study. He says that his physical rehabilitation is progressing well, although he feels that certain things have changed mentally. Previous to his participation in the study, he liked to go to bars and have beers with friends, now he says that, “I value my awareness much more than all of those crazy nights. My friends are having a homecoming party for me, but I don’t think I’ll stay at it long. Drunk people

kind of annoy me now. Everything around me is so fast and overwhelming at times. I feel like I have sensory overload just going to the grocery store.” This student therapist encouraged Mr. P to continue pursuing his education, and to invite a friend or two over for a quiet night of board games while he is adjusting to a life that is much more fast-paced than his quiet hospital room. She also suggested that he explore his awareness with occupations he previously found calming, such as yoga or a peaceful drive in his favorite park.

## Conclusions

### *Discharge Recommendations*

This client should continue to be independent in achieving his goals of studying personal training for a fulfilling career, moving into a new apartment, and creating a budget. Recommendations are for Mr. P to continue to use relaxation and coping strategies independently as needed.

### *Outcomes of this case related to MOHO*

The Model of Human Occupation model (Kielhofner, 2002) is based on client motives, patterns, and performance. Through participation in treatment planning, Mr. P set goals for himself, and maintained continuous self-assessment throughout participation in occupational therapy. Mr. P decided which goals to pursue, and which to set aside. Mr. P evaluated himself, with therapist assistance. Ultimately, Mr. P completed participation in the study successfully and without decompensation, which is the goal of all psychiatric occupational therapy services offered as a consult-liaison for research participants. A synergy of Mr. P’s volition, habits, and physical abilities were used in this case to set goals and plan interventions. This unique case illustrates wellness and prevention in

psychiatric occupational therapy using the Model of Human Occupation model of practice, an unusual case in that prevention is an uncommon approach for occupational therapy. The use of occupational therapy as a consult-liaison service to ensure participation in research is also an atypical purpose for psychiatric occupational therapy, but is a rapidly expanding area that demonstrates a need for further investigation regarding efficacy. Research in the future might successfully use the Model of Human Occupation to prevent psychiatric problems during hospitalization or participation in a study, as shown in this case.

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Appendix A: Results of the Role Checklist (Oakley, 1982)

	Role Identity			Value Designation		
Role	Past	Present	Future	Not at all	Somewhat	Very
Student	✓	✓	✓			✓
Worker	✓	✓	✓			✓
Volunteer	✓	✓	✓		✓	
Caregiver	✓	✓	✓			✓
Home Maintainer	✓	✓	✓		✓	
Friend	✓	✓	✓			✓
Family Member	✓	✓	✓			✓
Religious Participant	✓				✓	
Hobbyist/Amateur	✓				✓	
Participant in Organizations	✓		✓		✓	
Other: Volunteer/Support Groups	✓	✓	✓		✓	

Appendix B: Results of the Assessment of Occupational Function-Collaborative Version  
(Watts & Madigan, 1993)

(S)

I.

A. This person seemed to hear and understand all interview questions.

B. This person seemed to have moderate difficulty hearing and/or understanding interview questions.

C. This person seemed to have consistent difficulty hearing and/or understanding the interview questions. Please explain the nature, frequency, and/or degree of difficulty.

II.

A. This person easily expressed his/her ideas (consider thought processes and speech).

B. This person had moderate difficulty expressing his/her ideas (consider thought processes and speech).

C. This person had consistent difficulty expressing his/her ideas (consider thought processes and speech). Please explain the nature, frequency, and/or degree of difficulty.

Ratings are associated with the following labels:

5 = Very Highly

4 = Highly

3 = Moderately

2 = Little

1 = Very Little

**VOLITION SUBSYSTEM**

**HABITUATION SUBSYSTEM**

**Values (V)**

**Roles (R)**

1. Does this person demonstrate his/her values through the selection of well-defined, meaningful activities?

5

4

3

2

1

1. Does this person demonstrate an adequate array of life roles (family member, student, worker, hobbyist, friend, etc.)?

5

4

3

2

1

2. Does this person demonstrate his/her values through the selection of personal goals?

5

4

3

2

1

2. Does this person have a realistic concept of the demands and social obligations of his/her life roles?

5

4

3

2

1

3. Does this person demonstrate socially appropriate values through the selection of personal standards for the conduct of daily activities?

5

4

3

2

1



3. Does this person express comfort or security in his/her major life roles?

5

4

3

2

1

4. Does this person demonstrate temporal orientation through expressed awareness of past, present, and future events and beliefs about how time should be used?

5

4

3

2

1

**Habits (H)**

**Personal Causation (PC)**

1. Does this person demonstrate habit patterns through well-organized use of time?

5

4

3

2

1

1. Does this person demonstrate personal causation through an expressed belief in internal control?

5

4

3

2

1

2. Does this person report that his/her habits are socially acceptable?

- 5
- 4
- 3
- 2
- 1

2. Does this person demonstrate personal causation by expressing confidence that he/she has a range of skills?

- 5
- 4
- 3
- 2
- 1

3. Does this person demonstrate adequate flexibility in his/her habits?

- 5
- 4
- 3
- 2
- 1

3. Does this person demonstrate personal causation by expressing confidence in his/her skill competence at personally relevant tasks?

- 5
- 4
- 3
- 2
- 1

**OCCUPATIONAL PERFORMANCE SKILLS (S)**

4. Does this person demonstrate personal causation by expressing hopeful anticipation for success in the future endeavors?

- 5
- 4
- 3

2

1

1. Does this person have adequate motor skills necessary to move himself/herself or manipulate objects?

5

4

3

2

1

**Interests (I)**

2. Does this person have adequate skills for managing events, processes, and situations of various types?

5

4

3

2

1

1. Does this person clearly discriminate between degrees of interests?

5

4

3

2

1

3. Does this person have communication and interpersonal skills necessary for interacting with people?

5

4

3

2

1

2. Does this person clearly identify a range of interests?

5

4

3

2

1

3. Does this person routinely pursue his/her interests?

5

4

3

2

1

### Appendix C: Occupational Questionnaire

<b>OCCUPATIONAL QUESTIONNAIRE</b> Developed by N.Riopel Smith with assistance from G. Kielhofner and J. Hawkins Watts (1986).				
Today's date _____ Name _____ Age _____				
TYPICAL ACTIVITIES	QUESTION 1	QUESTION 2	QUESTION 3	QUESTION 4
For the half hour beginning at:	I consider this activity to be: 1 - work 2 - daily living work 3 - recreation 4 - rest	I think that I do this: 1 - Very well 2 - Well 3 - About average 4 - Poorly 5 - Very poorly	For me this activity is: 1 - Extremely important 2 - Important 3 - Take it or leave it 4 - Rather not do it 5 - Total waste of time	How much do you enjoy this activity: 1 - Like it very much 2 - Like it 3 - Neither like it nor dislike it 4 - Dislike it 5 - Strongly dislike it
5:00am	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
11:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
11:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
12:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

OCCUPATIONAL QUESTIONNAIRE (CONTINUED)

TYPICAL ACTIVITIES  For the half hour beginning at:	QUESTION 1 I consider this activity to be: 1 - work 2 - daily living work 3 - recreation 4 - rest	QUESTION 2 I think that I do this: 1 - Very well 2 - Well 3 - About average 4 - Poorly 5 - Very poorly	QUESTION 3 For me this activity is: 1 - Extremely important 2 - Important 3 - Take it or leave it 4 - Rather not do it 5 - Total waste of time	QUESTION 4 How much do you enjoy this activity: 1 - Like it very much 2 - Like it 3 - Neither like it nor dislike it 4 - Dislike it 5 - Strongly dislike it
12:30pm	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
1:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
1:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
2:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
2:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
3:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
3:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
4:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
4:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
5:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
6:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
7:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
10:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
11:00	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
11:30	1 2 3 4	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5







## Appendix E: Canadian Occupational Performance Measure (Law et al., 1994).

<b>Goal</b>	<b>Initial Importance (1-10)</b>	<b>Discharge Importance (1-10)</b>	<b>Initial Performance (1-10)</b>	<b>Discharge Performance (1-10)</b>
<b>1. move into own place</b>	<b>9</b>	<b>7*</b>	<b>8</b>	<b>7*</b>
<b>2. pay off car</b>	<b>5</b>		<b>10</b>	
<b>3. meet new people</b>	<b>4</b>		<b>7</b>	
<b>4. find a fulfilling job</b>	<b>10</b>	<b>9*</b>	<b>7</b>	<b>9*</b>
<b>5. go on vacation</b>	<b>2</b>		<b>1</b>	
<b>6. get back into shape</b>	<b>6</b>		<b>6</b>	
<b>7. learn and play more guitar</b>	<b>3</b>		<b>1</b>	
<b>8. create a better budget</b>	<b>8</b>	<b>8*</b>	<b>6</b>	<b>8*</b>
<b>9. study to become a personal trainer</b>	<b>7</b>	<b>10*</b>	<b>8</b>	<b>9*</b>

\* Mr. P's top four goals were assessed at discharge.

Appendix F: Occupational Self Assessment (OSA) Occupational Therapy Services  
 Planning and Implementation: Long Term Goal/Short Term Goals (Baron et. al, 2002)

Long Term Goal	Short Term Goals
<p>1. Mr. P will self-report his independent review of self-identified resources in preparation for a career in personal training by discharge.</p>	<p>1. Mr. P will independently initiate internet and phone contact with a local personal training school after one week of occupational therapy in preparation for attending school after discharge.</p>
<p>2. Mr. P will self-report his independent review of resources in preparation for moving to a new apartment by discharge.</p>	<p>1. Mr. P will identify resources to review in preparation for moving to a new apartment with minimal assistance after two weeks of occupational therapy.</p>
<p>3. Mr. P will create his budget for the next year with minimal assistance during psychiatric occupational therapy by discharge.</p>	<p>1. Mr. P will identify expenses and income to be included in his budget during the first two weeks of occupational therapy with minimal assistance to prepare for gaining financial independence from his father after discharge.</p>
<p>4. Mr. P will self-report his independent plan of an education schedule for the next two years by discharge.</p>	<p>1. Mr. P will independently identify resources to review in preparation for a career in personal training after two weeks of occupational therapy.</p>