The Study of Cognitive Rehabilitation Effectiveness

The SCORE clinical trial is a randomized controlled treatment trial evaluating the effectiveness of cognitive rehabilitation in post-deployment military service members who sustained a concussion.

Chapter 4: Traditional Cognitive Rehabilitation for Persistent Symptoms Following Mild Traumatic Brain Injury (SCORE Arm 3)

Part I: Clinician Guide to Individual Cognitive Rehabilitation Interventions

1).

Acknowledgements

The SCORE study team would like to express our sincere gratitude to the men and women in uniform who participated in this study. We are humbled by the trust you placed in us to provide the best care possible and to learn more about how to help those with traumatic brain injuries (TBIs) who follow you.

We would like to acknowledge the special contributions and leadership skills of Janel Shelton, the SCORE study coordinator, and the dedication and professionalism of her staff, Sylvia Davis and Gina Garcia. Their efforts were essential to the success of the study.

Finally, we would like to thank the Defense & Veterans Brain Injury Center (DVBIC) who, under the leadership of Col. Jamie Grimes in 2010, identified and entrusted us to execute this congressionally mandated study, and provided us with additional staffing and research facilitation.

Congress established DVBIC in 1992 after the first Gulf War in response to the need to treat service members with TBI. DVBIC's staff serves as the Defense Department's primary TBI subject matter experts. DVBIC is part of the U.S. Military Health System and is the TBI operational component of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE). Learn more about DVBIC at **dvbic.dcoe.mil**.

SCORE Grant Acknowledgements

(Heather Belanger, Tracy Kretzmer, and Rodney Vanderploeg) This material is based upon work supported by the Department of Veterans Affairs, Veterans Health Administration, Office of Research and Development, Health Services Research and Development Service (VA HSR&D IIR 13-196-1),and Clinical Sciences Research and Development (VA CSRD W81XWH-13-2-0095).

This work was supported by a Department of Veterans Affairs Rehabilitation Research and Development Career Development Award to Dr. Jacob Kean (CDA IK2RX000879).

(David Tate, Jan Kennedy, Douglas Cooper) This work is supported in part by the Defense and Veterans Brain Injury Centers and the Telemedicine and Advanced Technology Research Center.

SCORE Disclaimer

The view(s) expressed herein are those of the author(s) and do not reflect the official policy or position of Brooke Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, the Department of Defense, the Department of Veterans Affairs, or the U.S. Government.

Chapter 4:
Traditional Cognitive Rehabilitation for Persistent Symptoms Following Mild Traumatic Brain Injury (SCORE Arm 3)

By Melissa R. Ray, CCC-SLP; M. Marina LeBlanc, OTR/L; R. Kevin Manning, Ph.D., CCC-SLP; Christine S. Fox, CCC-SLP; Christopher J. Gillis, OTR/L; Micaela V. Cornis-Pop, Ph.D.; Donald L. MacLennan, M.A., CCC-SLP; Linda M. Picon, M.C.D., CCC-SLP; and Deborah Voydetich, OTR/L, SCLV

Introduction

The following materials are part of "Arm 3/Traditional Cognitive Rehabilitation" for the Study of Cognitive Rehabilitation Effectiveness (SCORE).

The 60-hour intervention took place over 6 weeks. Every effort was made to assure continuity of therapist as well as time of day for client convenience. Clients participated in 5-hour daily individual traditional cognitive rehabilitation sessions and participated in 2 hours of traditional cognitive group therapy. In addition, clients had 1 hour of proctored computer-based "homework," 1 hour of individual cognitive rehabilitation homework and 1 hour of group homework each week.

Professionals with a variety of different backgrounds, including experienced occupational therapists and speech language pathologists, delivered the intervention. All SCORE participants received the standard of care, which included education (see Chapter 2) and symptom-based medical management consistent with the VA/DoD Clinical Practice Guideline for the Management of Concussion/Mild Traumatic Brain Injury.[1]

Chapter 4 is divided into the individual and group clinician guides and client manuals, as well as supplemental material for clinicians, including examples and answer keys. Session callouts in clinician guides refer to those locations in the client manuals.

- Part I: Clinician Guide to Individual Cognitive Rehabilitation Interventions
- Part II: Client Manual for Individual Cognitive Rehabilitation Interventions
- Part III: Clinician Guide to Arm 3 Traditional & Arm 4 Integrated Cognitive Group Rehabilitation Interventions
- Part IV: Client Manual for Arm 3 Traditional & Arm 4 Integrated Cognitive Group Rehabilitation Interventions
- Appendix A: Acronyms
- Appendices containing forms appropriate to chapter sections

Part I:
Clinician Guide to Individual Cognitive Rehabilitation Interventions

1: Goal Setting

Session 1: Assessment and Introduction

Topic: Goal Setting				
Session 1 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes**	**Time Allotted**
	Orientation to Manual		Refer to the Introduction to the *Study of Cognitive Rehabilitation Effectiveness Client Manual* and *SCORE Daily Planner* calendars.	5 Min
		Orient to *SCORE Daily Planner* sheet.		
	Clinical Interview		Refer to SCORE Cognitive Rehabilitation Assessment Template; Canadian Occupational Performance Measure© (COPM)[2] and Matching Person and Technology (MPT) Assessment.[3]	20 Min
	Administer COPM.		*Canadian Occupational Performance Measure© ordering information: https://www.caot.ca/copm/ordering.html*	15 Min
		Step 1 (A-C)		
		Steps 2 & 3 (optional)		
	Administer MPT Assessment.		*Form 2, History of Support Use: Technologies, Special Purpose Devices, and Personal Assistance*	10 Min
		Assistive Technology Assessment Form 2, History of Support Use		

Cognitive rehabilitation assessment

Name

Date of Visit

Duration of Session Cognitive assessment, 60 minutes

Chief Complaint

History of Present Illness Client is status post a mild traumatic brain injury (mTBI)/concussion sustained while deployed in support of Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF)/ and Operation New Dawn (OND, new name for OIF) and has residual cognitive complaints.

EDUCATION AND LEARNING PREFERENCE	
Level of Education	
Barriers to Learning	
Preferred Learning Style	
Primary Language	

SOCIAL HISTORY	
Marital Status	
Children	
MILITARY HISTORY	
Time in Service	
Number of Deployments	
Military Occupational Specialty	

PAIN	
Location	
Intensity	
Frequency	
Duration	
Quality	
Aggravating Factors	
Alleviating Factors	
NOTE: If pain is greater than 4 on the Baker Wong pain scale (1 to 10), refer client to primary care prescriber/primary prescriber for pain management.	

SPEECH AND LANGUAGE	
Language/Word Finding	
Speech/Stuttering/Slurred	

Assessments/measurements

The COPM[2] is an individualized outcome measure designed to detect change in a self-perception of occupational performance over time.[2] The COPM is available through the Canadian Association of Occupational Therapists (CAOT), published by CAOT Publications ACE.[2]
WORKSHEET FOR THE MPT MODEL. Use the form titled Technology Utilization Worksheet for the Matching Person and Technology[3] (MPT) Model to identify technologies used, desired, and needed. The worksheet is available through The Institute for Matching Person & Technology, 486 Lake Road Webster, New York 14580. Phone/fax 585/671-3461, email **IMPT97@aol.com**. http://www.matchingpersonandtechnology.com/mptdesc.html

Assessment summary

Client demonstrates memory/concentration/executive function difficulties caused by history of mTBI/concussion.

Cognitive rehabilitation therapy is recommended to improve attentional process, memory, and aspects of executive functioning. Client verbalized difficulty with self-care and productivity areas of occupational performance.

Procedure

Client GOAL		
TREATMENT GOALS Reassess date at end of 4 weeks.	GOAL STATUS *To be reassessed weekly*	
Reassess date at end of 6 weeks.		
Client will demonstrate ability to identify and set personal goals.	*Goal met/unmet*	Date:
Client will identify selective attention and appropriate strategies.	*Goal met/unmet*	Date:
Client will identify external and internal strategies to improve memory and learning.	*Goal met /unmet*	Date:
Client will identify steps to improve planning and organization.	*Goal met/unmet*	Date:
Client will identify system to improve prospective memory.	*Goal met/unmet*	Date:
Client will identify alternating attention and appropriate strategies.	*Goal met/unmet*	Date:

Client education

Client has been educated on the following:

- Typical pattern for recovery after mTBI/concussion to include a positive expectation for recovery
- Areas that will be addressed in the SCORE program

Client verbalized understanding and concurs with current plan of care.

Plan

Client will be seen seven times per week for 6 weeks in individual and group settings for cognitive rehabilitation treatment.

Session 2: Introduction to Goal Attainment Scaling

Topic: Goal Setting			
Session 2 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	Review: Scales from assessment	Refer to *Canadian Occupational Performance Measure©.*[2] Refer to *Matching Person and Technology Assessment.*[3]	5 Min
	COPM		
	MPT		
	Introduce: Goal Attainment Scaling (GAS)	Use *Introduction to Goal Attainment Scaling* and *Goal Attainment Scaling Forms.* For information on calculating a GAS score, weighing the goals by importance and difficulty and T-score conversion, refer to Kieresuk & Sherman, 1968[4]; Turner-Strokes, 2009[5]; and Malec, 1999.[6]	40 Min
	Review introduction to GAS form.		
	Define individual goals (expected level of outcome).		
	Begin to develop goals based on 6-step process.		
	Homework: Present homework and discuss expectations.	Use *Goal Attainment Scaling Forms.* See Appendix D for examples.	5 Min
	Continue to fill in GAS goals.		

Session 3: APT-3 and Generalization Activity

# Topic: Goal Setting				
Session 3 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes**	**Time Allotted**
	Homework: Review status of group homework.			2.5 Min
		Address any questions regarding homework.		
	APT-3		Refer to *Attention Process Training 3 (APT-3).*	30 Min
	Complete: APT-3 metacognitive and generalization activities		View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form* and refer to the *APT -3 Generalization Form Examples* in the following pages or in Appendix B. Clinician will refer to *Clinician Score Sheet* in the following pages or in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
		Review Performance on APT- 3 Software.		
		Discuss how various strategies can improve performance and discuss generalization to everyday activities.		
		Fill out clinician score sheet for current APT-3 session.		
	Introduce: APT-3 Homework requirements		*Client will be able to complete APT-3 Homework following the current individual session.*	2.5 Min

APT-3 Generalization Form Examples

Below are examples of how each APT-3 area can be related to everyday tasks that you encounter. You may refer to these examples when completing your APT-3 Generalization Form[7,8]

Basic Sustained	*The ability to maintain attention during continuous repetitive activities* ▪ Listening for your name in roll call ▪ Listening to the traffic report for your route home ▪ Listening for business closures on the news following an ice storm ▪ Reading the paper ▪ Sorting emails during your 30 minutes of administration time
Selective Attention	*Selectively processing target information while inhibiting responses to non-target information* ▪ Listening to your spouse in a busy waiting room ▪ Reading emails on your smartphone in a noisy area ▪ Filling out paperwork in a busy office ▪ Doing tasks in your office with construction next door ▪ Making dinner, with your children playing in the background
Executive Control, Working Memory	*Process for holding onto and manipulating information in one's head such as during mental calculations* ▪ Determining a tip at a restaurant ▪ Identifying an alternate route home ▪ Determining travel departures and arrival times (especially when changing time zones) ▪ Converting measurements while baking or building

Executive Control Suppression	*Ability to control impulsive responding* ▪ Not hitting the gas when a light turns green and there is a car in front of you ▪ Speaking before it is your turn, or interrupting in a conversation
Executive Control Alternating	*Ability to shift one's focus of attention (between/among tasks)* ▪ Making dinner as your children periodically call on you for help with homework ▪ Answering the phone and responding to emails during your 30-minute break

You may use these basic titles when filling out your APT3 Generalization Form			
	Sustained Attention Auditory & Visual		Suppression (inhibition) Auditory & Visual
	Selective Attention		Alternating Attention Auditory
	Working Memory		Alternating Attention Visual

Client Name: _____ APT – 3 Level: _____ SCORE Week_____

Clinician Score Sheet: Performance Summary Across Trials[7]							
Task Variables Speed: SLOW/FAST Clinician Voice: MALE/FEMALE							
Date	Version	Trial	Error Pattern **Start** **End** **Del**ayed **Rand**om	Strategies Observed** (See key below) (**SI**) =self-initiated strategy use (**CP**)=clinician prompted strategy use	**Client Rating**		
					Effort (1-10)	Motivation (1-10)	Accuracy (1-100)

**Strategies Observed			
Task Completion		**Motivation/Self Efficacy**	**Task Understanding**
Re-Auditorizing (**Re-Aud**)	**Br**eathing (Br)	Working toward a **goal** (Goal)	**Rep**eating instructions (Rep)
Visualizing (Vis)	**Pacing** (Pace)	Self-**talk** (Talk)	**Wri**ting a reminder (Wrt)
Verbal self-cueing (Verb)	**Body** alert (Bod)	**Rew**ards self (Rew)	
Counting on **fing**ers (Fing)	Looking at **scr**ee**n** (Scrn)	**Br**eathing/Relaxation (Br)	
Closing **eyes** (Eyes)		**Cl**inician encouragement (Cl)	

Notes:

Session 4: Continue Goal Attainment Scaling

Topic: Goal Setting				
Session 4 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes**	**Time Allotted**
	Continue GAS.		Use *Introduction to Goal Attainment Scaling* and *Goal Attainment Scaling Forms* in Session 2 in the Client Manual.	50 Min
		Continue to develop and modify client's personal goals.		

Session 5: APT-3 and Generalization Activity

Topic: Goal Setting

Session 5 Objectives (50 minutes)

☑	Lecture topic		Notes	Time Allotted
	APT-3		Refer to *Attention Process Training Software.*	30 Min
	Complete: APT-3 Metacognitive and Generalization Activities		View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form* and refer to the *APT -3 Generalization Form Examples* in Appendix B. Clinician will refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
		Review performance on APT- 3 Software.		
		Discuss how various strategies can improve performance and discuss generalization to everyday activities.		
		Fill out clinician score sheet for current APT-3 session.		
	Address additional questions and concerns about APT-3.		Refer to *APT-3 Manual* and *Client Introduction to APT-3.*	5 Min
	Address additional questions and concerns about GAS.		**Consider making copies of GAS goals to keep on file.* Refer to *Clinician's Helper: Goal Attainment Scaling (GAS).*	
		Place forms with client's GAS goals in the *Goal Setting* section in the front of the manual.		

Clinician's helper: goal attainment scaling

See Appendix D for examples.

I. Purpose= Measures goal achievement/progress.
Rated on a continuum:

+2	+1	0	-1	-2
much more than expected	somewhat more than expected	expected outcome	somewhat less than expected **This is baseline for constructing GAS goals**	much less than expected

II. How to construct or revise GAS goals:

A. Construct goals using **SMART**

1. **S**pecific
2. **M**easurable
3. **A**ttainable *in the amount of time that client has in SCORE*
4. **R**ealistic *for completion during engagement in SCORE*
5. **T**imely

B. Prioritize goals from most important to least important (goal number one is most important)

C. For each goal, first define where client is currently performing (-1 on GAS scale)

D. After current performance spelled out, define expected level of outcome (0 on scale)

E. After expected level of outcome spelled out, define +1 and +2 goals

F. After +1 and +2 goals spelled out, define -2 goals

G. Follow-up/review at the end of each week

2: Sustained and Selective Attention

Session 1: What is Attention?

Topic: Staying Focused **Sustained and Selective Attention**			
Session 1 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	Check: APT-3 Homework was: Completed from previous week Pending assignment for the week	Check *Homework APT-3 Generalization Form.*	5 Min
	What is Attention? Importance for memory Sustained Selective Alternating Divided	Refer to *The Memory System & What is Attention.*	10 Min
	Activity Identify type of attention used in daily activities. Introduce the Specialist Smith case study. Have client identify daily routine activities and match the type of attention used with activity, for example, driving and talking on the phone.	Use examples in *What is Attention.* Highlight examples of attention breakdowns in *Specialist Smith Case Study.*	10 Min
	Introduce: Strategies for attention	Refer to *Optimizing Attention.* Identify strategies for Specialist Smith.	10 Min
	Homework: Present homework and discuss expectations. Clients track when and how they lose attention in their environments and possible modifications.	Refer to *Identifying Distractions.*	15 Min

Session 2: APT-3 and Generalization Activity

Topic: Staying Focused **Sustained and Selective Attention**			
Session 2 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	APT-3	Refer to *Attention Process Training Software.*	30 Min
	Complete: APT-3 metacognitive and generalization activities Review performance on APT- 3 software. Discuss how various strategies can improve performance and discuss generalization to everyday activities. Fill out clinician score sheet for current APT-3 session.	View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form* and refer to the *APT -3 Generalization Form Examples* in Appendix B. Refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
	Homework: Check on homework status.	Refer to *Identifying Distractions.*	5 Min

Session 3: Attention Energy Management

Topic: Staying Focused
Sustained and Selective Attention

Session 3 Objectives (50 minutes)

☑	Lecture topic		Notes	Time Allotted
	Homework: Review status of group homework.			5 Min
		Address any questions regarding homework.		
	Match activity to attention level.		Refer to the following: *Attention Energy Management*	35 Min
		Identify cognitive demands of tasks.		
		Identify consequences of tasks.		
		Have client identify tasks from different domains and identify level of difficulty and consequence for Specialist Smith based on case study.	*Specialist Smith Case Study*	
		Refer client to complete *Attention Energy Demands with Tasks.*	*Attention Energy Demands with Tasks*	
	Homework: Check on homework status.		Refer to *Identifying Distractions* and *Attention Energy Demands with Tasks.*	10 Min

Session 4: APT-3 and Generalization Activity

Topic: Staying Focused
Sustained and Selective Attention

Session 4 Objectives (50 minutes)

☑	Lecture topic		Notes	Time Allotted
	APT-3		Refer to *Attention Process Training software.*	30 Min
	Complete: APT-3 metacognitive and generalization activities		View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT-3 Program>History (View)>Task Data Over Time or Detailed Task Data.*	15 Min
		Review performance on APT- 3 Software.		
		Discuss how various strategies can improve performance and discuss generalization to everyday activities.	For generalization activity, refer client to *APT -3 Generalization Form* and refer to the *APT -3 Generalization Form Examples* in Appendix B.	
		Fill out clinician score sheet for current APT-3 session.	Refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	
	Homework: Check on homework status.		Refer to *Identifying Distractions* and *Attention Energy Management*	5 Min

Session 5: Distractions, Energy Demands, and Environmental Strategies

Topic: Staying Focused **Sustained and Selective Attention**			
Session 5 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	Homework: Discuss completed homework assignments.	Refer to *Identifying Distractions* and *Attention Energy Demands with Tasks* in the client manual.	10 Min
	Activity: Enhance your space. Highlight important facts, details and design your perfect work environment. Reduce visual distractions. Reduce auditory distractions. Place furniture. Choose lighting. Determine work surface height. Select room temperature. Place supplies in office Select white noise. Designate a location. Draw or use cut-out furniture to illustrate environmental strategies.	Refer to *Optimizing Attention: Environmental Strategies* Refer to *Enhance Your Space, Furniture Placement* and *Draw Your Room to Scale.*	25 Min
	Goal review/modification Match learned skills to goals.	Refer to *Clinician's Helper: Goal Attainment Scaling.* Refer to client's *Goal Attainment Scaling Forms* (located in the Goal Setting section in the front of the manual).	15 Min

Clinician's helper: goal attainment scaling

See Appendix D for examples.

I. Purpose= Measures goal achievement/progress.
Rated on a continuum:

+2	+1	0	-1	-2
much more than expected	somewhat more than expected	expected outcome	somewhat less than expected **This is baseline for constructing GAS goals**	much less than expected

II. How to construct or revise GAS goals:

A. Construct goals using **SMART**

1. **S**pecific
2. **M**easurable
3. **A**ttainable *in the amount of time that client has in SCORE*
4. **R**ealistic *for completion during engagement in SCORE*
5. **T**imely

B. Prioritize goals from most important to least important (goal number one is most important)

C. For each goal, first define where client is currently performing (-1 on GAS scale)

D. After current performance spelled out, define expected level of outcome (0 on scale)

E. After expected level of outcome spelled out, define +1 and +2 goals

F. After +1 and +2 goals spelled out, define -2 goals

G. Follow-up/review at the end of each week

3: Memory and Learning

Session 1: The Memory System

Topic: How We Remember & Why We Forget Memory and Learning			
Session 1 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	Check: APT-3 Homework.	Check *Homework APT-3 Generalization Form.*	5 Min
	Completed from previous week		
	Pending assignment for the week		
	Discuss the types of memory and the process of memory.	Refer to *The Memory System.*	5 Min
	Discuss effects of memory and learning difficulties in personal settings, work and school settings.	Refer to *Daily Effects of Memory and Attention Difficulties.* **Note:** Highlight those areas discussed in this week's materials or those in which you can apply internal memory strategies to improve retrieval.	
	Discuss how internal memory strategies can improve encoding. Introduce the difference between internal and external compensatory strategies.	Refer to *Internal Memory Strategies.*	20 Min
	Visual imagery		
	Association		
	Rehearsal		
	First letter cues/mnemonics		
	Categorization		
	Story method		
	Rhymes		
	Active observation		
	Additional ways to improve encoding	Discuss "being an active communication partner."	
	Active communication partner		

	Activity: Remember 10 words using strategies.		Refer to *Word Recall Part 1 and Part 2*.	10 Min
		Present client with 10 words.		
		Ask for immediate recall; discuss strategies used and help provide suggestions for better encoding.		
	Homework: Present homework and discuss expectations.		Refer to *Everyday Ways to Use Internal Memory Strategies*.	5 Min
		Identify strategies used during each situation presented.		
	Ask client to recall 10 words once again.		Refer to *Word Recall Part 3* in Session 3.	5 Min
		Identify strategies used to recall words.		

Session 2: APT-3 and Generalization Activity

Topic: How We Remember & Why We Forget Memory and Learning			
Session 2 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	APT-3	Refer to *APT-3 software.*	30 Min
	Complete: APT-3 metacognitive and generalization activities	View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form,* and refer to the *APT -3 Generalization Form Examples* in Appendix B. Refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
	Review performance on APT- 3 software.		
	Discuss how various strategies can improve performance and discuss generalization to everyday activities.		
	Fill out clinician score sheet for current APT-3 session.		
	Homework: Check on homework status	Refer to *Everyday Ways to Use Internal Memory Strategies* worksheet	5 Min

Session 3: Internal Memory Strategies

Topic: How We Remember & Why We Forget Memory and Learning			
Session 3 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	Homework: Review status of group homework. Address any questions regarding homework.		5 Min
	Homework: Discuss completed homework assignment.	Refer to *Answer Key*: *Everyday Ways to Use Internal Memory Strategies*.	5 Min
	Quiz: List 5 internal strategies that can facilitate learning and improve memory.	Refer to *Memory Strategy Pop Quiz*.	5 Min
	Discuss: How memory and learning strategies can be used in everyday functional situations Identify the strategies you would use in various situations.	Refer to *What Would You Do?*	5 Min
	Practice: Application of various internal strategies in different situations	Refer to *Practice Makes Perfect – Learning Internal Memory Strategies*.	15 Min
	Discuss how external compensatory strategies/systems and assistive technology can improve encoding.	Refer to *External Cognitive Aids to Improve Memory and Learning*.	15 Min
	Taking notes (outlines)	Refer to *Using External Strategies* and the *Underline, Highlight, & Note-taking* example.	
	Highlighting and underlining		
	Computers, smart phones, recorders, smart pens		
	Intentional reading form	Refer to *Intentional Reading Form*.	
	PQRST/SQ3R *Will be reviewed further during group session*	Refer to *PQRST & SQ3R*, defined as preview, question, read, state/summary, test (PQRST) and survey, question, read, recall/recite, review (SQ3R).	

Answer key: everyday ways to use internal memory strategies

Visual Imagery	Active observation	Association
Rehearsal	First letter cues	Rhymes (sayings)
Categorizing	Story method	Chunking

Identify the internal memory strategy that was used to improve memory and learning in the following situations:

Mary frequently gets lost. Now, when she gets directions, she asks for landmarks and creates pictures of them in her mind. She stated that it helps her to picture herself turning right past the drugstore, versus turning right at the second stoplight.

Which strategy is she using? _____*Visual Imagery*_____

Brittany always forgets her friends' birthdays. She currently relies on her cell phone calendar to remember them. However, she has made it a personal goal to recall the dates independently.

Brittany has tried using repetition no success. Now, she is looking at the months and days. She is trying to make correlations to other holidays, events or even particular numbers that stand out. For instance "Rebecca and Mary's birthdays are both on the 18th. However, one is in January and one is in November."

Which strategy might represent the technique she is using? *Association/Categorization*

Dan just opened his own medical practice. He thinks it is very important to remember his patients' full names when he sees them in his office or in the community. Dan originally tried using their name frequently during their first few appointments. Dan said things like, "Have a nice day Bob" versus just "Okay, have a nice day."

Which strategy is he using? _____*Repetition*_____

When this strategy does not work, Dan tries to pair the name of the new person with someone he already knows with that name (such as a relative or even a famous person).

Which strategy is he using? _____*Association*_____

Zoe has problems remembering information from conversations. Sometimes, she forgets facts she needs to remember. For example, she forgets things her friends might say like, "Meet me at the movie theatre at 3:30 on Saturday so we can get the matinee discount." Zoe forgets general information from conversations. For example, she forgets when a coworker tells her, "My daughter just joined gymnastics this year and has been doing really well in competition." Zoe always feels bad when she has to be reminded of these things.

Zoe realizes she can't write down everything, so she has been trying out some new techniques. To remember dates and times from a conversation, she might repeat the important facts aloud ("So, I will meet you at the theatre at 3:30 because that is 30 minutes before the movie starts." or "Oh, so your daughter has been in gymnastics for one year? That's great. How often does she compete?"). Zoe thinks repeating what she had heard is helpful.

Which strategy is she using? ___*Repetition*___

Michael is taking a safety course at his job and is nervous about the quiz at the end. There are many rules and steps to remember. He was trying to remember the steps to manipulate a fire extinguisher. Michael kept repeating the steps, but they would not "stick." A friend sitting next to him said, "My wife learned a way to remember the steps at her job by using the word PASS (Pull, Aim, Squeeze, Sweep)."

Which strategy is this? ___*First Letter Cues/Mnemonics*___

Adam is having difficulty remembering how many medications to take each day. He knows which medication is for what; however, Adam just cannot remember the correct doses (1 of this, 2 of that). Therefore, Adam came up with a solution to this problem. His solution is to state in the morning: "2 for pain, 3 for gain" and state at night: "3 for head, 4 for bed."

Which strategy is he using? ___*Rhyming*___

Erica has a new workout routine at the gym recommended by her Physical Therapist. She tried carrying around a note card with the activities written on it; however, she frequently lost the note card. Erica decided she needed to memorize the list of exercises instead. In the clinic, the exercises are typically written on paper or whiteboards. When Erica is memorizing the exercises, she tries to group them by the area in which she was working such as "legs, arms" and "biceps, hamstrings." With her new method, Erica is able to complete her workout consistently.

Which strategy is this? ___*Categorization/Association*___

Session 4: APT-3 and Generalization Activity

Topic: How We Remember & Why We Forget **Memory and Learning**			
Session 4 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	APT-3	Refer to *APT-3 Software.*	30 Min
	Complete: APT-3 Metacognitive and Generalization Activities Review performance on APT- 3 Software. Discuss how various strategies can improve performance and discuss generalization to everyday activities. Fill out clinician score sheet for current APT-3 session.	View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form* and refer to the *APT -3 Generalization Form Examples* in Appendix B. Refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
	Homework: Present homework and discuss expectations. Identify 4 situations in which you could apply one of the discussed strategies to improve memory and learning in your everyday environment	Refer to *Memory & Learning Generalization Chart.*	5 Min

Session 5: Memory and Learning

Topic: How We Remember & Why We Forget Memory and Learning				
Session 5 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes**	**Time Allotted**
	Homework: Discuss completed homework assignments.		Refer to *Memory & Learning Generalization Chart*.	10 Min
	Remember facts from a short story that is read aloud.		Refer to Answer key: Transportation in the 1800s quiz. Note: Client will practice strategies while reading during group session.	25 Min
		Read selected story aloud and have patients answer questions regarding facts about the story.		
		Discuss strategies used to improve learning and/or recall of the information from the story.		
		Identify 4 situations in which you could apply one of the discussed strategies to improve memory and learning.		
	Goal review		Refer to *Clinician's Helper: Goal Attainment Scaling*. Refer to client's *Goal Attainment Scaling Forms* (located in the Goals Setting section in the front of the manual).	15 Min
		Match learned skills to goals.		

Transportation in the 1800s[9,10,11]

Read the following one-page passage aloud. You may read the entire passage or break it into sections. Ask your client to apply internal strategies while listening and try to remember as many facts as possible.

In most regions of the United States between the 1800s and 1860s, agriculture was the foundation of the economy. However, this is when each region began to branch out and invest in separate areas.

The North showed interest in industry, commerce, and finance, while the South invested in plantations and subsistence farms. Westerners invested in commercialized family farms, agricultural processing and manufacturing. The various regions began to rely on each other's specialties. With these changes, the need for improved transportation and communication became important.

Natural Transportation by Water

With improvements in transportation, movement and trade of materials increased significantly. The Mississippi and Ohio rivers began transporting materials from the North to the South on flat boats. In 1807, the introduction of the steamboat led the way to improving transportation. Robert Fulton's Clermont steamboat completed its first mission up the Hudson River from New York City revealing that materials could now travel both ways on these southward flowing bodies of water. By 1815, steamboats were being used routinely to carry materials up the Mississippi and Ohio rivers.

Building of Roads and Canals

In the 1820s, improvements in East-to-West transportation began. Gravel-topped roads were built. East-to-West transportation also included travel on water. In 1825, the Erie Canal was built, connecting the great lakes with New York City and the Atlantic Ocean.

The Erie Canal is 363 miles long, much longer than the largest canal at that time, which was 28 miles long. In an attempt to justify building the Erie Canal, the canal was determined to decrease travel from Buffalo to New York City from 20 days to 6 days. In addition, this quick travel reduced freight charges from $100 a ton to $5 a ton. In 1835, just 10 years after it was built, the canal became so busy, it had to be made wider and deeper. Originally 40 feet wide and 4 feet deep, the canal was changed to 70 feet wide and 7 feet deep, resulting in the boom of the canal era. More canals were subsequently built because of the success of the Erie Canal.

Revolution of Railroads

Railroads were another form of transportation that began in the 1830s and continued to grow decades afterwards. In 1830 the first locomotive traveled along 13 miles of track constructed by the Baltimore and Ohio Railroad. By 1850, the United States had approximately 9,000 miles of railroad track. A decade later, this number more than tripled to 31,000 miles of railroad track.

Developments in transportation not only decreased the travel time between many locations in the United States but allowed for cheaper transfer of goods. Overall, the revolution of transportation transformed the future of the economy.

Answer key: Transportation in the 1800s quiz[9,10,11]

Quiz: Transportation in the 1800s	
1	During the beginning of change to the nation's economy, in what three areas did the North show interest? *Industry, commerce, finance*
2	In 1807, what mode of transportation was introduced? *Steamboat*
3	In what year was the Erie Canal built? *1825*
4	What two natural bodies of water were the primary sources of transportation between the North and the South? *Mississippi and Ohio Rivers*
5	The length of the Erie Canal exceeded the longest canal of that time by how many miles? *363-28 = 335*
6	Ten years after the canal was built, the size was increased to what width and depth? *70 feet wide, 7 feet deep*
7	The Erie Canal decreased travel time from Buffalo to New York City from the previous 20 days to how many days? *Six*
8	In what year was the first locomotive launched? 1830
9	How many miles did the first locomotive travel on its first run? *13 miles*
10	Transporting freight along the Erie Canal reduced freight charges from what cost to what cost per ton? *$100 per ton to $5 per ton*

Clinician's helper: goal attainment scaling

See Appendix D for examples.

I. Purpose= Measures goal achievement/progress.
Rated on a continuum:

+2	+1	0	-1	-2
much more than expected	somewhat more than expected	expected outcome	somewhat less than expected **This is baseline for constructing GAS goals**	much less than expected

II. How to construct or revise GAS goals:

A. Construct goals using **SMART**

1. **S**pecific
2. **M**easurable
3. **A**ttainable *in the amount of time that client has in SCORE*
4. **R**ealistic *for completion during engagement in SCORE*
5. **T**imely

B. Prioritize goals from most important to least important (goal number one is most important)

C. For each goal, first define where client is currently performing (-1 on GAS scale)

D. After current performance spelled out, define expected level of outcome (0 on scale)

E. After expected level of outcome spelled out, define +1 and +2 goals

F. After +1 and +2 goals spelled out, define -2 goals

G. Follow-up/review at the end of each week

4: Planning and Organization

Session 1: Executive Functions

Topic: Mission Ready Planning & Organization				
Session 1 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes**	**Time Allotted**
	Homework: Check on APT-3 homework status.		Check *Homework* and *APT-3 Generalization Form.*	5 Min
		Completed from previous week		
		Pending assignments for the week		
	Define Executive Functions.		Refer to *Executive Functions.*	5 Min
	Discuss the importance of organization, planning and time management.		Refer to *Importance of Planning, Time Management, & Organization.*	30 Min
	Identify factors that affect planning and organization.			
	Discuss effects of lack of organization on daily function.			
	Homework: Present homework and discuss expectations.		Refer to the following: *Example of 5-Day Calendar* & *Example of Planning You Day* *Planning Your Day* *Five-Day Calendar*	10 Min
		Discuss *Divide and Conquer* (High Priority/Low Priority).		
		Complete *Planning Your Day* forms daily (See Homework instructions and examples of completed forms).		

Homework instructions for clinicians

This activity involves writing a "task list" or "to do list" for each day to improve planning, organization, and time management, among others. When explaining the homework assignment, the clinician will ask the client to complete the first *Planning Your Day* form for the current session. Explain to the client you realize the day has started, but ask the client to complete the *Planning Your Day* form as if his or her day has yet to begin. An example of a completed *Planning Your Day* form is included in the client manual.

Once the client has completed the *Planning Your Day* form, the client should enter the *High Priority* items into the 5-day calendar before entering the *Low Priority* items. Each block on the 5-day calendar represents 30 minutes of time. Therefore, if an appointment lasts for 60 minutes, the client should enter the appointment into two blocks (see example of the completed 5-day calendar).

Have the client complete the *Planning Your Day* form each night for the next day (i.e., the client will complete a form for Tuesday on Monday night, etc.). Also, ensure that the client enters the tasks into the 5-day calendar.

Session 2: APT-3 and Generalization Activity

Topic: Mission Ready Planning & Organization			
Session 2 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	APT-3	Refer to *APT-3 Software.*	30 Min
	Complete: APT-3 Metacognitive and Generalization Activities	View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form* and refer to the *APT -3 Generalization Form Examples* in Appendix B Refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
	Review performance on APT- 3 software.		
	Discuss how various strategies can improve performance and discuss generalization to everyday activities.		
	Fill out clinician score sheet for current APT-3 session.		
	Homework: Review status on homework.		5 Min

Session 3: Problem Solving

Topic: Mission Ready Planning & Organization			
Session 3 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	Homework: Review status of group homework. Address any questions regarding homework.		5 Min
	Activity: Problem solving	Refer to the following: *Problem Solving Activity* *Goal-Plan-Review* *Problem Solving Strategy*	45 Min
	Monitor use of planning systems learned previously.	Refer to *Planning Your Day* in Session 1.	5 Min

Problem Solving Activity

Instruct the client to identify the problem in each scenario and develop a solution. The client may use the problem solving strategy worksheet for each problem or only select problems.

Next, the client will identify a problem and solution he or she would like to implement. Use the Goal-Plan-Review form to record the goal (of applying the strategy or solution identified earlier) and develop a plan to reach the goal.

1. *You have difficulty remembering to pay your bills on time. Your cell phone service has been stopped two times and you have paid over $200 in late fees. The bank has notified you of possible repossession of your new Camaro. What can you do?*

   Problem: *Not paying bills on time*

   Solution: *Set alarms in smartphone for bills*

Positive (+)	**Negative (-)**
-Can set repeating reminders in calendar *-Can have alarms or alerts for reminders* *-Can set the alert for the day before*	*-Don't always have my ringer on* *-Don't like my phone going off constantly*

Goal-plan-review example

GOAL

(What do I want to accomplish?)

Use my smartphone calendar to remind me to pay bills on time.

PLAN

(How am I going to accomplish my goal?)

1. *Find all bill due dates from paper bills or online.*
2. *Identify the best time of day to set alerts to pay each bill.*
3. *Set reminders for the due date and have it repeat through the entire year.*
4. *Set an additional alert for the day before the bill is due.*
5. *Set a specific label color for bills in the calendar option on my smartphone.*

REVIEW

(What worked? What didn't work? What would I have done differently?)

The alerts reminded me. The time was a little too early when I was at work, and I forgot to reset it for later. Set the alerts to go off when I am available to pay my bill immediately.

Session 4: APT-3 and Generalization Activity

Topic: Mission Ready Planning & Organization			
Session 4 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	APT-3	Refer to *APT-3 Software.*	30 Min
	Complete: APT-3 metacognitive and generalization activities	View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT-3 Program>History (View)>Task Data Over Time or Detailed Task Data.*	15 Min
	Review performance on APT- 3 software.		
	Discuss how various strategies can improve performance and discuss generalization to everyday activities.	For generalization activity, refer client to *APT -3 Generalization Form,* and refer to the *APT -3 Generalization Form Examples* in Appendix B.	
	Fill out clinician score sheet for current APT-3 session.	Refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	
	Monitor use of planning systems learned previously.		5 Min

Session 5: Organizing Personal Papers

Topic: Mission Ready Planning & Organization			
Session 5 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes** For this session you will need a *Soldier's Shoebox* (not included), a box containing various types of documents (e.g., bills, paperwork, junk mail).	**Time Allotted**
	Activity: File organization	Refer to *Organizing Personal Papers* instructions for clinician.	35 Min
	Identify categories for file organization.		
	Sort personal papers (phone bills, car payments, utilities, Army forms, promotion packets, medical evaluation board paperwork, physical evaluation board) from *Soldier's Shoebox*.		
	Analyze the method/plan that was used to complete this activity and the outcome: Which strategies were implemented and which strategies may improve the performance/outcome?		
	Homework: Discuss completed homework assignment.	Refer to *Planning Your Day* in Session 1.	5 Min
	Discuss benefits of technique.		
	Discuss possibilities of adapting system to current external memory system (low or high tech).		
	Identify the important factors of the *Planning Your Day* activity that should be transferred to an individualized system (i.e., high/low priority, checking frequently/daily, rewriting lists).		
	Goal Review/Modification	Refer to *Clinician's Helper: Goal Attainment Scaling* and to client's *Goal Attainment Scaling Forms* (located in the Goal Setting section in the front of the manual).	10 Min
	Match learned skills to goals.		

Organizing personal papers

Instructions for clinicians:

- Have the client sort/organize all of the papers (e.g., receipts, junk mail, catalogs, Army forms, bills, etc.) into appropriate categories.
- Have the client apply metacognitive strategies throughout this process.

Questions for clinicians to ask as they sort through the papers:

1. What categories/stacks do you think should be included?
2. How will you arrange papers within each category/stack?
3. How will you decide what can be discarded?
4. After you have sorted through your box, what should you do next?
5. If you decide to keep any of your papers, what is the best way to save them?

Clinician's helper: goal attainment scaling

See Appendix D for examples.

I. Purpose= Measures goal achievement/progress.
Rated on a continuum:

+2	+1	0	-1	-2
much more than expected	somewhat more than expected	expected outcome	somewhat less than expected **This is baseline for constructing GAS goals**	much less than expected

II. How to construct or revise GAS goals:

A. Construct goals using **SMART**

1. **S**pecific
2. **M**easurable
3. **A**ttainable *in the amount of time that client has in SCORE*
4. **R**ealistic *for completion during engagement in SCORE*
5. **T**imely

B. Prioritize goals from most important to least important (goal number one is most important)

C. For each goal, first define where client is currently performing (-1 on GAS scale)

D. After current performance spelled out, define expected level of outcome (0 on scale)

E. After expected level of outcome spelled out, define +1 and +2 goals

F. After +1 and +2 goals spelled out, define -2 goals

G. Follow-up/review at the end of each week

5: Prospective Memory & Assistive Technology

Session 1: Prospective Memory—What is it?

Topic: Remembering to Remember Prospective Memory and Assistive Technology			
Session 1 Objectives (50 minutes)			
☑	**Lecture Topic**	**Notes**	**Time Allotted**
	Homework: Check APT-3 homework status.	Refer to *Homework APT -3 Generalization Form.*	5 Min
	Completed from previous week		
	Pending assignments for the week		
	Define: The types of memory	Refer to *The Memory System.*	10 Min
	Sensory		
	Short-term		
	Long-term		
	Define: The stages of memory		
	Attention		
	Encoding		
	Consolidation		
	Retrieval		
	Define: Prospective memory	Refer to *Prospective Memory.*	
	Identify: Common memory difficulties and factors that affect memory	Refer to *Daily Effects of Memory and Attention Difficulties.*	10 Min
	Discuss normalization of memory difficulties.		
	Discuss effects on daily function.		
	Review memory goals.		
	Review: Assistive technology questionnaire	Refer to *External Memory Strategies.* Refer to *Tips for Technology* and *Selecting a System.*	20 Min
	Introduce: Multiple uses of high and low tech devices		
	Determine efficiency of current compensatory system.		
	Make suggestions for modifications.		
	Homework: Present homework and discuss expectations.	Refer to *Secret* file (not included).	5 Min
	Client is to deliver *Secret* file to clinic this same day at time designated by clinician, and mutually agreed upon by client.		

Secret File

The purpose of the secret file is to serve as a prospective memory task for the client. The secret file should be a tangible item the client will be required to turn in or deliver to a designated person at a designated time. The clinician may say, for example, "You will need to take this form to your case manager this afternoon between 1400 and 1500 hours when she is available" or "Fill out this form and turn it in to the front desk when you come to your next appointment." The secret file may be:

- A sealed envelope
- A form to be filled out
- An informational document

Session 2: APT-3 and Generalization Activity

Topic: Remembering to Remember Prospective Memory and Assistive Technology			
Session 2 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	Homework: Assign prospective memory task. (Clinician tells client to say when there are 4 minutes left in the session. When client tells clinician that there are 4 minutes left, the client will be asked to do the *Homework* sheet. *Homework* can be completed very quickly. If client does not remember to tell clinician at 4 minutes left in session, he/she will do *Homework* outside of session.) **Note***:* Encourage client to use external cues and strategies (either visual or auditory)	Refer to *Homework*.	2 Min
	APT-3	Refer to *APT-3 Software*.	30 Min
	Complete: APT-3 metacognitive and generalization activities	View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT-3 Program>History (View)>Task Data Over Time or Detailed Task Data*. For generalization activity, refer client to *APT-3 Generalization Form* and refer to the *APT-3 Generalization Form examples* in Appendix B. Clinician will refer to *Clinician Score Sheet* in Appendix C to enter data For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
	Review performance on APT- 3 software.		
	Discuss how various strategies can improve performance and discuss generalization to everyday activities.		
	Clinician fills out clinician score sheet for current APT-3 session		
	Complete *Homework* in session **or** discuss *Homework* that needs to be completed	Refer to *Secret File* in Session 1.	3 Min
	Have client identify successful strategy if he completed activity and suggest alternate strategy if he did not complete activity successfully		

Session 3: How Will You Remember?

Topic: Remembering to Remember **Prospective Memory and Assistive Technology**			
Session 3 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes** For this session, you will need the **Model** of Specialist Smith's home.	**Time Allotted**
	Homework: Review status of group homework. Address any questions regarding homework.		10 Min
	Activity: Use role play to practice using various compensatory devices during session. Train and practice implementing client's compensatory device to manage schedule, medications, budgeting, family birthdays, anniversaries, household responsibilities and other tasks. **Note:** If client moves through this exercise quickly, move to *Where are my car keys?* Exercise.	Refer to *How Will You Remember…?*	40 Min
	Activity: Review *Where Are My Car Keys?* Direct client to look at model of Specialist Smith's home (model form) to complete the activity.	Refer to *Where Are My Car Keys? (Part 1)*	

Specialist Smith's home

The purpose of the Specialist Smith's Home activity is to provide visual examples of compensatory strategies for everyday memory tasks such as remembering where you put your phone, or remembering daily tasks. Organization and routines are key strategies in this activity. For this activity, a model home was used; however, alternatives may be the following:

- Pictures of rooms in a house accessed on the internet (entry way, kitchen or place frequented in the house)
- Pictures of the client's house
- The therapy room where sessions are conducted

Session 4: APT-3 and Generalization Activity

Topic: Remembering to Remember **Prospective Memory and Assistive Technology**				
Session 4 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes**	**Time Allotted**
	APT-3		Refer to *APT-3 Software.*	30 Min
	Complete: APT-3 metacognitive and generalization activities		View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT-3 Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form* and refer to the *APT -3 Generalization Form Examples* in Appendix B. Refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
		Review performance on APT- 3 software.		
		Discuss how various strategies can improve performance and discuss generalization to everyday activities.		
		Fill out clinician score sheet for current APT-3 session.		
	Homework: Check on homework status			5 Min
		Make sure client continues to use compensatory strategies and/or equipment to keep track of pertinent information		

Session 5: Prospective Memory—Where Are My Car Keys?

Topic: Remembering to Remember **Prospective Memory and Assistive Technology**				
Session 5 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes**	**Time Allotted**
	Review the ways that the client can modify his/her home environment to make remembering things easier.		Refer to *Where are my car keys (Part 2)* sheet.	25 Min
	Goal Review/Modification		Refer to *Clinician's Helper: Goal Attainment Scaling.*	
		Match learned skills to goals.	Refer to client's *Goal Attainment Scaling Forms* (located in the Goal Setting section in the front of the manual).	25 Min

Clinician's helper: goal attainment scaling

See Appendix D for examples.

I. Purpose= Measures goal achievement/progress.
Rated on a continuum:

+2	+1	0	-1	-2
much more than expected	somewhat more than expected	expected outcome	somewhat less than expected **This is baseline for constructing GAS goals**	much less than expected

II. How to construct or revise GAS goals:

A. Construct goals using **SMART**

1. **S**pecific
2. **M**easurable
3. **A**ttainable *in the amount of time that client has in SCORE*
4. **R**ealistic *for completion during engagement in SCORE*
5. **T**imely

B. Prioritize goals from most important to least important (goal number one is most important)

C. For each goal, first define where client is currently performing (-1 on GAS scale)

D. After current performance spelled out, define expected level of outcome (0 on scale)

E. After expected level of outcome spelled out, define +1 and +2 goals

F. After +1 and +2 goals spelled out, define -2 goals

G. Follow-up/review at the end of each week

6: Alternating Attention

Session 1: Attention

Topic: Juggling Duties Alternating and Divided Attention				
Session 1 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes** You will use a set of individually cut address cards (included): *Names & Address Sorting List..*	**Time Allotted**
	Homework: Check APT-3 homework.		Check *Homework APT-3 Generalization Form.*	5 Min
		Completed from previous week		
		Pending assignment for the week		
	Review the components of information processing.		Refer to *The Memory System.* Focus on short-term/working memory and refer to the following: *Working Memory – process responsible for holding information in short term memory* *Responsible for holding on to and manipulating information – known as "temporary scratch pad"*	5 Min
		Sensory		
		Short-term (working) memory		
		Long-term memory		
	Review concept of alternating and divided attention.		Refer to *What is Attention.*	10 Min
		The idea of multitasking—is it really more efficient?		
	Activity: Complete alternating and divided attention task with address cards.		Refer to *Yes/No Trivia & Address Cards.* Complete *Metacognitive Rating Scale* for this activity.	20 Min
		Refer to *Metacognitive Rating Scale.* Discuss tradeoff between accuracy of performance & speed.		
	Homework: Assign *Juggling Duties Challenges* and discuss expectations.		Refer to *Juggling Duties Challenges.*	10 Min
		Direct clients to identify situations where they alternate and multi task/alternate attention in their daily routine environment.		

Answer key: YES/NO trivia

YES/NO Trivia Answer Key

Alternating and Divided Attention Task

Please answer each of the following questions you hear with a Yes or No.

At the same time, I will give you instructions on how to separate this set of address cards. The order in which you must sort the cards will change. I will tell you when to change.

Give client set of address cards.

Instruct client to sort cards in alphabetical order as follows every 3-4 minutes:

a. Begin sorting by the name of business
b. Now sort by contact person
c. Now sort by city

Continue activity until client has completed at least 10 minutes. You may repeat the sorting order instructions.

	Questions	Answer	Response
1	Is today Monday (fill in day of the week)?	Y	
2	Is the year 2011?	N	
3	Is it night time?	N	
4	Are we in Houston?	N	
5	Are there 256 days in a year? *365*	N	
6	Is this an Air Force base?	N	
7	Did you have breakfast?	Y/N	
8	Do you like playing sports?	Y/N	
9	Are the Spurs your favorite sports team?	Y/N	
10	Have you been to the dining facility today?	Y/N	
11	Is it rainy outside?	Y/N	
12	Did you drive here today?	Y/N	
13	Is the Fourth of July Holiday coming up?	Y/N	

14	Do you enjoy meals-ready-to-eat (MREs)?	Y/N	
15	Is today your birthday?	Y/N	
16	Are there 5,280 feet in a mile?	Y	
17	Are there 3 quarts in a gallon?	N	
18	Does mixing the colors yellow and blue make purple?	N	
19	Is a group of fish called a pod?	N	
20	Does 14 + 17 equal 31?	Y	
21	Is Mercury the closest planet to Earth? *Venus or Mars*	N	
22	Are there 12 ounces in a pound? *16*	N	
23	Was Buzz Aldrin the first man to walk on the moon?	N	
24	Do you have your ID card with you?	Y/N	
25	Are there 3 feet in a yard?	Y	
26	Including the end zone, are there 120 yards on a football field?	Y	
27	Are there 30 miles in a marathon? *26.2*	N	
28	Is a baker's dozen twelve? *13*	N	
29	Are opossums part of the marsupial family?	Y	
30	Is a group of lions called a pack? *pride*	N	
31	Does an average baby weigh 8 pounds? *7.5*	N	
32	Is Camaro made by Chrysler? *Chevy*	N	
33	Is Benjamin Franklin on the 100 dollar bill?	Y	
34	Was China recently afflicted with a tsunami?	N	
35	Is salt removed from water in the process of desalination?	Y	
36	Is a president's term in office 5 years? *4*	N	
37	If you can run 2 miles in 13 minutes, will it take you 36 minutes to run 4? *26*	N	

38	A brief you will be attending lasts 1 ¼ hours. Will it end at 1145 if it starts at 0930? *1045*	N	
39	Is the voting age 21? *18*	N	
40	Is New York City in the West Coast time zone?	N	
41	Is New Orleans at sea level? *Below sea level*	N	
42	Are Congressional representatives elected to 2-year terms?	Y	
43	Are there 100 members of the U.S. Senate?	Y	
44	Do state governors control the National Guard in times of peace?	Y	
45	Does the U.S. Coast Guard operate as part of the Army during war time? *Navy*	N	
46	"Semper Fi" means always faithful. *Marines*	Y	
47	Was the Army the first branch of the U.S. Armed forces to be created? *June 14, 1775*	Y	
48	Are there 6 fighting branches in the U.S. Military? *5*	N	
49	Does the Army have the motto "This We'll Defend"?	Y	
50	Are the Blue Angels part of the Air Force? *Navy*	N	

Address cards: name & address sorting list

Two Barrel Gun Range ATTN: Lance Lott 6103 Chester Road Boise, Idaho	Allstar Appliance Mart ATTN: Sara Tillman 7199 Stave Road Queens, New York
Modern Manufacturing ATTN: Ethan Wolfe 6907 Caracol Drive Bridgewater, Massachusetts	Silver and More Jewelry ATTN: Anna Smithe 2730 Wilson Ave Seattle, Washington
Loose Cannon Gun Range ATTN: Victor Dowdy 805 Pinon Circle Sandusky, Ohio	Integrated Computer Consultants ATTN: Becky Ellsworth 37920 Orion Blvd Birmingham, Alabama
United Plumbing Service ATTN: David Hammoc 27492 Rittaman Road White Plains, New York	Merritt Excavation ATTN: Paul Merritt 5000 N Loop 289 Allen Park, Georgia

Wilford Shooting Supply ATTN: Darren Day 9123 North Shore Drive Wheaton, Ohio	Appraisals R Us ATTN: Perry Guilde 6371 Howard St South Bend, Indiana
Four Corners Electronics ATTN: Jacob Brown 102 Mountain Ave Manhattan, New York	Investing Your Way ATTN: Rodrick Cantburry 12304 Woodlawn Ave Greenfield, Pennsylvania
Choice Chiropractic ATTN: Beth Jackson 14573 Center Ave Nashville, Tennessee	Rainbird Irrigation ATTN: Gerry Giford 2587 Lester Road San Jose, California
University Book Store ATTN: Sandra Raff 5672 Great South Road East Lansing, Michigan	Ice Cream You Scream ATTN: Susie Landry 4973 Merry Ave Naples, Florida

Fantastic Furniture ATTN: Anthony Jerrod 7001 Stahl Road Northfield, Minnesota	Sandy's Graphics and Tees ATTN: Matthew Bitters 1590 Courage Road Scottsdale, Arizona
Serenity Security Systems ATTN: Janelle Whitlock 30032 Tundra Road Cleveland, Ohio	Everyone's Hero Shooting ATTN: Robert Crona 587 Oats Boulevard Los Angeles, California
Graples Convenient Store ATTN: Seth Goode 17648 Meadowlark Lane Myrtle Beach, South Carolina	Mother's Mattress Gallery ATTN: Alejandro Juarez 9008 Pilsner Road Richfield, Utah
Q-T Tuxedos ATTN: Taryn Johnson 543 Frost Street Fargo, Minnesota	Green Tree Mortgage ATTN: Dora Fiscal 40167 Frozen Street Anchorage, Alaska

Utterly Different Toys ATTN: Karin Wales 999 Punch Lane Blaine, Washington	Freedom Furniture Repair ATTN: Faith Ferrity 37004 Rover Drive Dover, Delaware
Northern Remodeling ATTN: Erin Pipers 222 Vault Road Hibbing, Minnesota	Winner's Circle Guns and Ammo ATTN: Michael Sutton 631 Gang Ave Westland, New York
Gateway Jewelry ATTN: Valerie Luna 397 Ariel Lane Memphis, Tennessee	Aeronautics of the West ATTN: Alton Smith 3017 Ocean Road Carmel, California
Quality Subs ATTN: Melvin Coughlin 55870 Tundra Road Seattle, Washington	Iridescent Salon ATTN: Sally Kross 1349 Red Dye Road Tempe, Arizona

Valley Realty ATTN: Scott Manheim 7871 Jamestown Blvd Hershey, Pennsylvania	The Split End Salon ATTN: Emily Culbertson 9000 Eisenhower Blvd Hollywood, California
Behavior Help Line ATTN: Laurence Carol 4370 Green Mountain Road Chicago, Illinois	Colossal Comedy Club ATTN: Jeremy Fowl 891 Captain Street Annapolis, Maryland
Cheery Cleaners ATTN: Pauline Cotton 11100 Dryer Toronto, Canada	Charlie's Barber Shop ATTN: Charlie Stanton 5647 Troll Drive Roosevelt, Utah
Gold Gloves Gym ATTN: George Mathis 4872 Valor Circle Redford, Michigan	Kidz Korral Learning Center ATTN: Debra Carson 8300 Sage Drive Springfield, Illinois

Brandon's Bait and Tackle ATTN: Mitch Brandon 2340 Pier Ave Lake Lansing, Michigan	Home Away From Home Hotel ATTN: Gabriel Saenz 92673 Azura Circle Syracuse, New York
Equal Equity ATTN: John Stockton 6372 Durbin Drive Bangor, Maine	Pistol Packin' Donna ATTN: Donna Terry 40879 Cherry Drive Tampa, Florida
Computer Solutions ATTN: Jory Allison 13467 Hathaway Jackson, Wyoming	Nanna's Nail Salon ATTN: Nellie Fry 741 Drowning Drive Madison, Wisconsin
Nuts and Bolts Hardware ATTN: Harry Zimmerman 2014 Mesquite Ave Chicago, Illinois	Dentures Dental ATTN: Dale Young 134 Candy Street Santa Rosa, California

Ferngully Florist ATTN: Rosa Medallion 3057 Budding Lane Honolulu, Hawaii	Slick Willie's Tires ATTN: Murphy Stiles 4691 Cross Court San Antonio, Texas
Terrible Tees ATTN: Josia Auburn 23401 Burnt Tree Street Denver, Colorado	Mayberry Range ATTN: Martin Sutton 7395 Pomeranian Court Columbus, Ohio
Conrad's Motor Company ATTN: Saul Merin 13975 Atwater Court Buffalo, New York	Cuticles Spa ATTN: Bethany Boss 69270 Lions Denver, Colorado
Targets Galore ATTN: Jeffrey Goodenough 46931 Sheffield Court Mansfield, Illinois	Killer Security Services ATTN: Kidd Knight 91800 Millers Street Pittsburg, Pennsylvania

Southern Lawns Landscaping ATTN: Miranda Funde 17383 Ironhorse Drive Helotes, Texas	Albuquerque Appliance Mart ATTN: Karol Cruise 9797 Warhouse Road Albuquerque, New Mexico
Advanced Heating and Cooling ATTN: Melvin Winters 7777 Jockey Lane Charleston, Virginia	Tree Trimming Solutions ATTN: Louis McPeters 22933 Pewter Eugene, Oregon

Session 2: APT-3 and Generalization Activity

Topic: Juggling Duties Alternating and Divided Attention				
Session 2 Objectives (50 minutes)				
☑	**Lecture topic**		**Notes**	**Time Allotted**
	APT-3		Refer to *APT-3 Software.*	30 Min
	Complete: APT-3 metacognitive and generalization activities		View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT-3 Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form* and *APT -3 Generalization Form Examples* in Appendix B. Refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
		Review performance on APT- 3 Software.		
		Discuss how various strategies can improve performance and discuss generalization to everyday activities.		
		Complete score sheet for current APT-3 session.		
	Homework: Check on homework status.		Refer to *Juggling Duties Challenges* in Session 3.	5 Min
		Due Session 3: Identify areas of breakdown.		

Session 3: Juggling Duties Challenges, Aids and Strategies

Topic: Juggling Duties **Alternating and Divided Attention**			
Session 3 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	Homework: Review status of group homework.		5 Min
	Address any questions regarding homework.		
	Homework: Check on individual homework status.	Refer to *Juggling Duties Challenges*.	5 Min
	Today, (Session 3) client should have identified areas of breakdown. C*ontinue on Session 5 if not completed.*		
	On Session 5, identify solutions to the identified areas of breakdown.		
	Discuss: Internal strategies	Refer to *External Memory Strategies* and *Internal Memory Strategies*.	10 Min
	Visual imagery		
	Association		
	Rehearsal		
	Rhymes		
	Chunking		
	Discuss: External strategies		
	Highlighting		
	Taking notes		
	Recorder		
	Activity: Alternating and divided attention task: Instruct client on *Autism Spectrum Disorder & Hamlet* procedure.	Refer to *Autism Spectrum Disorder& Hamlet.*	15 Min
	Client to read a passage and respond to questions at end of allotted time. Give Client *Autism Spectrum Disorders* text.	Client reviews *Autism Spectrum Disorders* text.	
	Alternate with memorization task every 3 to 4 minutes, client to try to remember *Hamlet Soliloquy*.	Client switches to *Hamlet Soliloquy*. *Refer to Autism Spectrum Disorders & Hamlet Soliloquy Quiz Answer Key*	
	Metacognition	Complete *Metacognitive Rating Scale*.	15 Min
	Highlight strategies client used.		

Answer key: autism spectrum disorders & Hamlet soliloquy quiz

Client is to engage in this activity after education on strategies to optimize attention. Direct the client to read the *Autism Spectrum Disorder* text. Instruct client that he/she will be asked questions about the text afterward. Client will be 'Interrupted' in his/her reading by another task demand periodically while doing this exercise. Interrupt every 3 to 4 minutes to switch to a memorization task, such as Hamlet. Ask the following questions within the allotted time for activity, and ask the client to recite what he/she remembers of Hamlet.	
1	What does ASD stand for? *Autism Spectrum Disorder*
2	Name three syndromes associated with ASD? *Aspergers Syndrome, Rett Syndrome, Autistic Disorder and Pervasive Developmental Disorder*
3	Which doctor first documented ASD? *Dr. L. Kanner*
4	What is the prevalence of ASD worldwide? *Two to six children per 1,000*
5	Name one symptom that babies with ASD may exhibit. *Unresponsive to people; Stare at item for long periods of time*
6	If a child doesn't speak a word by a certain age, he/she may have ASD. What is this age? *16 months*
7	What are some indicators of ASD in a small child? *Inappropriate playing with toys; Fixation on one toy. Hearing problems; Not smiling when smiled at*
8	TRUE or FALSE: Children with ASD are not emotionally attached to their parents. *False*
9	If a child with ASD is going to speak, he/she will speak by what age? *Nine*
10	TRUE or FALSE: One in three children with ASD has a seizure disorder. *False*
11	Besides difficulties with communication and emotional attachment, what other problem(s) do children with ASD have? *Abnormal sensory registry*
12	What does IFSP stand for? *Individualized Family Service Plan*
13	How much of the Hamlet passage do you remember? Recite as much as you can.

Session 4: APT-3 and Generalization Activity

Topic: Juggling Duties **Alternating and Divided Attention**			
Session 4 Objectives (50 minutes)			
☑	**Lecture topic**	**Notes**	**Time Allotted**
	APT-3	Refer to *APT-3 Software.*	30 Min
	Complete: APT-3 metacognitive and generalization activities Review performance on APT- 3 software. Discuss how various strategies can improve performance and discuss generalization to everyday activities. Fill out clinician score sheet for current APT-3 session.	View performance on APT-3 Computer Program through *View Data on Performance,* then select the task to view or edit *Current APT-3Program>History (View)>Task Data Over Time or Detailed Task Data.* For generalization activity, refer client to *APT -3 Generalization Form* and refer to *APT -3 Generalization Form Examples* in Appendix B. Clinician will refer to *Clinician Score Sheet* in Appendix C to enter data. For information on APT-3 sections, refer to *APT-3 Manual* (available on APT-3 drive).[7]	15 Min
	Homework: Check on homework status.	Refer to *Juggling Duties Challenges* in Session 3.	5 Min

Session 5: Audio Recording and Zip Code Locations

☑	Lecture topic	Notes	Time Allotted
	Topic: Juggling Duties **Alternating and Divided Attention**		
	Session 5 Objectives (50 minutes)		
	Homework: Discuss completed homework assignments. Specifically identify areas where breakdown occurs.	Refer to *Juggling Duties Challenges* in Session 3.	5 Min
	Activity: Cancellation task with auditory distracter Allow client 1 minute to review questions in *audio recording* questions. Instruct client to complete location selected with*Zip Code Map* while radio story plays. Have client identify possible strategies to use during task. Play audio recording.	Refer to *Audio Recording Questions*. Refer to *Zip Code Location and Zip Code Map*. Refer to *Internal Memory Strategies & External Memory Strategies* in Session 3 for ideas. Play *audio recording*.	20 Min
	Metacognition Have client complete *Metacognitive Rating Scale*. Discuss performance on tasks. Highlight effect of completing a timed task. Discuss external and internal strategies. What strategies were used?	Refer to *Metacognitive Rating Scale*.	15 min
	Program wrap up Review personal goals and the Goal Attainment Scaling process. Discuss the importance of generalization and application of learned skills.	Refer to *Clinician's Helper: Goal Attainment Scaling*. Refer to client's *Goal Attainment Scaling Forms* (located in the Goal Setting section in the front of the manual) Refer to *Score Summary*.	10 Min

Audio recording questions

Instruct client as follows:

You will hear a set of audio recordings and then answer the following questions. At the same time, you will complete the Zip Code Location task.

Refer to *Zip Code Location*.

Take 1 minute to review the questions before we begin.

	Play chosen audio recordings

Questions	*Responses*
1	
2	
3	
4	
1	
2	
3	
4	
1	
2	
3	
4	

Clinician's helper: goal attainment scaling

See Appendix D for examples.

I. Purpose= Measures goal achievement/progress.
Rated on a continuum:

+2	+1	0	-1	-2
much more than expected	somewhat more than expected	expected outcome	somewhat less than expected **This is baseline for constructing GAS goals**	much less than expected

II. How to construct or revise GAS goals:

A. Construct goals using **SMART**

1. **S**pecific
2. **M**easurable
3. **A**ttainable *in the amount of time that client has in SCORE*
4. **R**ealistic *for completion during engagement in SCORE*
5. **T**imely

B. Prioritize goals from most important to least important (goal number one is most important)

C. For each goal, first define where client is currently performing (-1 on GAS scale)

D. After current performance spelled out, define expected level of outcome (0 on scale)

E. After expected level of outcome spelled out, define +1 and +2 goals

F. After +1 and +2 goals spelled out, define -2 goals

G. Follow-up/review at the end of each week

References

1. Department of Veterans Affairs, Department of Defense. The Management of Concussion/mTBI Working Group. (2009). VA/DoD Clinical Practice Guideline for the Management of Concussion/MTBI. Version 1.0. Washington, DC: The Office of Quality and Performance, VA, & Quality Management Directorate, United States Army MEDCOM.
2. Canadian Association of Occupational Therapists. Canadian Occupational Performance Measure©. CAOT Publications ACE. Retrieve from https://www.caot.ca/copm/ordering.html.
3. The Institute for Matching Person & Technology. Technology Utilization Worksheet for the Matching Person and Technology (MPT) Model. New York. Retrieve from http://www.matchingpersonandtechnology.com/mptdesc.html.
4. Kiresuk, T.J., Sherman, R.E. (1968).Goal attainment scaling a general method for evaluating comprehensive community mental health programs. *Community Mental Health Journal, 4*; 443-453.
5. Turner-Strokes, L. (2009). Goal attainment scaling (GAS) in rehabilitation: a practical guide. *Clinical Rehabilitation*, *23*; 362-370.
6. Malec, James F. (1999). Goal attainment scaling in rehabilitation. *Neuropsychology Rehabilitation,* 9 (3/4); 253-275.
7. Sohlberg, M. M. & Mateer, C. A. (2010). Attention Process Training -3 (APT-3): A Direct Attention Training Program for the Remediation of Attention Deficits: APT-3 Manual. Lash & Associates Publishing/Training Inc., Youngsville, North Carolina.
8. Sohlberg, M.M, Johnson, L., Paule, L., Raskin, S. A., & Mateer, C. A. (2001). APT-II Attention Process Training: A Program to Address Attentional Deficits for Persons with Mild Cognitive Dysfunction. Lash & Associates Publishing/Training Inc., Youngsville, North Carolina.
9. Norton, M., Katzman, D., Escott, P., Chudacoff, H., Paterson, T., Tuttle, W., & Brophy, W. (1999). A People and A Nation. Houghton Mifflin Company, Boston, MA.
10. Thies, C.F. (2002). The American Raildroad Network during the Early 19th Century: Private versus Public Enterprise. *CATO Journal*, 22-2, 229.
11. Woods, R.O. (2009). The Genesis of the Steamboat. Mechanical Engineering, 131-4; 44-47.

Appendix A: Acronyms

APT	Attention Processing Training
ASD	Autism Spectrum Disorder
CAOT	Canadian Association of Occupational Therapists
COPM	Canadian Occupational Performance Measure
CP	clinician prompted (strategy use)
DoD	Department of Defense
GAS	Goal Attainment Scaling
MPT	Matching Person & Technology
mTBI	mild traumatic brain injury
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OND	Operation New Dawn (new name for OIF)
PQRST	preview, question, read, state/summary, test
SCORE	Study of Cognitive Rehabilitation Effectiveness
SI	self-initiated (strategy use)
SMART	specific, measurable, attainable, realistic, timely (goals)
SQ3R	survey, question, read, recall/recite, review
TBI	traumatic brain injury
VA	Department of Veterans Affairs

Appendix B: APT-3 Generalization Form Examples

Below are examples of how each APT-3 area can be related to everyday tasks that you encounter.
You may refer to these examples when completing your APT-3 Generalization Form[7,8]

Basic Sustained	*The ability to maintain attention during continuous repetitive activities* ▪ Listening for your name in roll call ▪ Listening to the traffic report for your route home ▪ Listening for business closures on the news following an ice storm ▪ Reading the paper ▪ Sorting emails during your 30 minutes of administration time
Selective Attention	*Selectively processing target information while inhibiting responses to non-target information* ▪ Listening to your spouse in a busy waiting room ▪ Reading emails on your smartphone in a noisy area ▪ Filling out paperwork in a busy office ▪ Doing tasks in your office with construction next door ▪ Making dinner, with your children playing in the background
Executive Control, Working Memory	*Process for holding onto and manipulating information in one's head such as during mental calculations* ▪ Determining a tip at a restaurant ▪ Identifying an alternate route home ▪ Determining travel departures and arrival times (especially when changing time zones) ▪ Converting measurements while baking or building

Executive Control Suppression	*Ability to control impulsive responding* ▪ Not hitting the gas when a light turns green and there is a car in front of you ▪ Speaking before it is your turn, or interrupting in a conversation
Executive Control Alternating	*Ability to shift one's focus of attention (between/among tasks)* ▪ Making dinner as your children periodically call on you for help with homework ▪ Answering the phone and responding to emails during your 30-minute break

You may use these basic titles when filling out your APT3 Generalization Form			
	Sustained Attention Auditory & Visual		Suppression (inhibition) Auditory & Visual
	Selective Attention		Alternating Attention Auditory
	Working Memory		Alternating Attention Visual

Appendix C: Clinician Score Sheet[7]

Client Name: _____ APT – 3 Level: _____ SCORE Week_____

Clinician Score Sheet: Performance Summary Across Trials							
Task Variables Speed: SLOW/FAST Clinician Voice: MALE/FEMALE							
Date	Version	Trial	Error Pattern **Start** **End** **Del**ayed **Rand**om	Strategies Observed** (See key below) (**SI**) =self-initiated strategy use (**CP**)=clinician prompted strategy use	**Client Rating**		
					Effort (1-10)	Motivation (1-10)	Accuracy (1-100)

**Strategies Observed

Task Completion		**Motivation/Self Efficacy**	**Task Understanding**
Re-Auditorizing (**Re-Aud**)	**Br**eathing (Br)	Working toward a **goal** (Goal)	**Rep**eating instructions (Rep)
Visualizing (Vis)	**Pacing** (Pace)	Self-**talk** (Talk)	**Wri**ting a reminder (Wrt)
Verbal self-cueing (Verb)	**Body** alert (Bod)	**Rew**ards self (Rew)	
Counting on **fing**ers (Fing)	Looking at **scr**ee**n** (Scrn)	**Br**eathing/Relaxation (Br)	
Closing **eyes** (Eyes)		**Cl**inician encouragement (Cl)	

Notes:

Appendix D:
Goal Attainment Scaling Goal Examples

Goal:	**I will improve my attention in order to read my college coursework without getting distracted**
+2	I will read my college textbook for 60 minutes before requiring a 10 minute break
+1	I will read my college textbook for 45 minutes before requiring a 10 minute break
0	I will read my college textbook for 30 minutes before requiring a 5-10 minute break
-1	I read my college textbook for 20 minutes before requiring a 5-10 minute break
-2	I will be able to read my college textbook for less than 20 minutes before requiring a 5-10 minute break

Goal:	**I will improve efficiency of completing tasks at work with fewer distractions and better time management.**
+2	I will be able to work on work assignments (at desk and on the computer) for 60 minutes before requiring a 10 minute break
+1	I will be able to work on work assignments (at desk and on the computer) for 45 minutes before requiring a 5 minute break
0	I will be able to work on work assignments (at desk and on the computer) for 35 minutes before requiring a 5 minute break
-1	I work on work assignments (at desk and on the computer) for 25 minutes before requiring a 5 minute break
-2	I will be able to work on work assignments (at desk and on the computer) for less than 25 minutes before requiring a 5 minute break

Goal:	**I will be able to pay attention to what my spouse tells me and remember more of what I'm told.**
+2	I will repeat the information told to me in conversations immediately, independently
+1	I will repeat the information told to me in conversations immediately with a minimal cue from my spouse
0	My spouse will have to remind me 1 time, the information provided during conversations
-1	My spouse reminds me 2 or more times, information provided during conversations
-2	My spouse will remind me of information from conversations daily and complete the tasks that I forget

Goal:	**I will remember to take my medications without cues from my spouse or family.**
+2	I will remember my medication with my alarms and no reminders from my spouse
+1	I will remember my medication with my alarms and my spouse will have to remind me less than 4 times a week
0	My spouse will have to remind me 1 time per day of my medications
-1	My spouse reminds me 2 or more times per day of my medications
-2	My spouse will gives me my medications each dose, each day