

# Self-Monitoring Intervention Guide

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# What is Self-Management?

- Self-management includes self-monitoring, goal setting, self-evaluation, self-instruction, and strategy instruction (Rafferty, 2010)
- Self-management is an established intervention for individuals with autism spectrum disorder (ASD) age 15-21 years old for increasing academic, interpersonal, and self-regulation skills as well as decreasing restrictive, repetitive behaviors, interests, or activities according to the National Standards Project (National Autism Center, 2015)
- Self-management strategies, including self-monitoring, is considered an evidence-based practice by the National Professional Development Center on Autism Spectrum Disorders (Wong et al., 2014)
- A review of the literature on self-management by Busacca and colleagues (2015) found that self-management interventions meet What Works Clearinghouse standards to be classified as an evidence based practice for reducing problem behaviors in general education settings
- A meta-analysis on self-management interventions by Briesch and Briesch (2016) found a large mean effect size of 0.93

# What is Self-Monitoring?

- One of the most commonly used self-management strategy is self-monitoring
- Self-monitoring is a process where a child monitors, manages, records, and assesses their own behavior to promote self-regulation, independence, maintenance, and generalization
- Self-monitoring should be used for performance deficits, not skill deficits
- Self-monitoring can be used to help children **stay on-task** (Amato-Zech, Hoff, & Doepke, 2006; Holifield et al., 2010; Legge, DeBar, & Alber-Morgan, 2010; Otero & Haut, 2016), **decrease stereotypic or repetitive behaviors** (Crutchfield et al., 2015), **increase social interaction** (Parker & Kamps, 2011); **reduce behavior problems** (Bruhn, McDaniel, & Kreigh, 2015), and **improve academic performance in school** (Falkenberg & Barbetta, 2013)
- Self-monitoring interventions have a large effect size of 1.90 (Mooney et al., 2005)



# Who Can Use Self-Monitoring?

- Self-monitoring is typically used with elementary age children in order to promote independence
- Depending on the complexity of the behavior and recording method, self-monitoring can be used for a wide range of individuals
- Self-monitoring has been effectively used for preschoolers to adults with and without disabilities including learning disability, attention-deficit/hyperactivity disorder, behavioral problems, and ASD (Mooney et al., 2005)
- A meta-analysis of self-monitoring for students with ASD by Davis and colleagues (2016) found a large effect for students with ASD (mean effect size = 0.83)
- Self-monitoring was significantly more effective for elementary and secondary age students compared to primary aged students with ASD (Davis et al., 2016)
- It is important to consider the child's current level of self-awareness, communication, and cognitive functioning before implementing a self-monitoring intervention

# Implementing the Intervention

- There are two key components of a self-monitoring intervention
  - Self-observation: identifying and monitoring the target behavior
  - Self-recording: recording whether the target behavior occurred or not
- In order to self-monitor, the child must be able to:
  - Understand what the target behavior looks like
  - Discriminate between appropriate and inappropriate instances of the behavior
  - Accurately and honestly record their behavior
  - Reward themselves intrinsically or extrinsically (i.e., access reinforcers) for reaching set goals
- The following diagram describes the steps used to plan and implement self-monitoring interventions
- Use the included “Self-Monitoring Cards” as visual reminders for the child during the intervention



## Step 1

### Define the Target Behavior

Create an operational definition that is specific, observable, and measurable of the behavior you want the child to self-monitor. Make sure the child can accurately identify the behavior.

★ Tip: To teach the target behavior, try role playing and modeling examples and non-examples.

## Step 2

### How & When?

Determine how the child will self-monitor (e.g., paper and pencil, electronically, rating scale, checklist, frequency count) and when they will self-monitor (i.e., time of day, specific activities, and duration).

## Step 3

### Design Recording Form

Use self-monitoring forms that are easy to understand and customize them to the child's interests. You may even create it with the child to individualize the form. Go over it with the child and practice recording.

★ Tip: Example recording templates are included in the appendix.

## Step 4

### Decide on a Cueing System

There are many different ways to let the child know when to self-monitor including verbal/visual cues, peer cues, audio recordings, the MotivAider device, timers, computers/tablets, and smart phones.

★ Tip: Use intervals that provide the least amount of interruption while prompting as often as needed.

## Step 5

### Teach & Practice

Go over the first 4 steps with the child and explain how to self-monitor. A trial run will help ensure that the child can effectively self-monitor. Provide feedback and error correction if necessary.

## Step 6

### Begin Self-Monitoring!

Make sure that the child has access to self-monitoring forms and any technology necessary.

# Self-Monitoring Card

Behavior:

Definition

Examples

Goal

# Self-Monitoring Card



Remember:



What  
should I  
be doing?

Use my  
data  
sheet!

Tell the  
truth!



# Special Considerations: Starting Out

- A “trial run” may be helpful to allow the child a chance to practice. Self-monitoring can help children increase their self-awareness, but they may require monitoring and feedback at first in order to make sure they are accurate, honest, and capable of self-monitoring correctly
- Consider using a behavior contract to clearly define the target behavior, explain how the procedure works, and describe what the child will earn for meeting set criteria before implementing the intervention. See appendix L for a behavior contract template
- Setting goals with your child and talking about their progress in meeting their goals can be beneficial to monitor progress and intervention integrity
- If the child has trouble remembering when to record their behavior, you may need to use a different cue or prompt. For example, if a stopwatch beeping is not prompting them to self-record, you may want to try another type of prompt such as a MotivAider or an application on a smart phone that vibrates

# Special Considerations: Technology

- Technology may be used to self-monitor performance
  - MotivAider
  - Timer/Stopwatch
  - Computers
  - Smart Phones
  - iPads/Tablets
  - Audio Recordings
    - <http://www.interventioncentral.org/free-audio-monitoring-tapes>
- Technology can be used to prompt the child to record their behavior or as a medium to record their behavior
- Use of technology can be a helpful aid to self-monitoring; however, it is important to only use technology as needed and fade dependence on external devices if possible



# Special Considerations: Technology

- There is currently limited research on using technology in self-monitoring interventions
- Various applications (i.e., I-Connect and SCORE IT) have been used with success in the studies that have been conducted (Vogelgesang et al., 2016; Wills & Mason, 2014); however, they are not commercially available
- It is important to consider the family's access to, and comfort with, technology before deciding to use electronic devices
- Graphing and charting the cumulative self-monitoring data could also be done using various programs (e.g., Microsoft Excel, ChartDog Graph Maker, etc.)



# Special Considerations: Reinforcement

- Otero and Haut (2016) found that self-monitoring alone improved the on-task behavior of two out of three students in a general education classroom, with all three students improving their on-task performance when reinforcement was added. Adding reinforcement further increased on-task behavior for two of the three students and actually resulted in more accurate self-monitoring
- Davis and colleagues (2014) also found that self-monitoring with reinforcement improved on-task behavior of a high school student more than just self-monitoring alone
- In contrast, a meta-analysis of self-management interventions found that interventions that included reinforcement had consistently smaller effect sizes (mean = 0.83) compared to interventions that did not include reinforcement (mean = 0.95) (Briesch & Briesch, 2016)
- To determine whether you should add a reinforcement component to the self-monitoring intervention, you must consider the unique needs of the child
- When using reinforcers, create the list of preferred items and activities with the child or administer a preference assessment to determine which rewards will be truly reinforcing. Provide choice and have a variety of items/activities to choose from
- Determine whether the child will self-administer the reinforcer or if someone will be in charge of providing the reinforcer for meeting the set criteria

# Special Considerations: Fading Intervention

- Make sure you have a set goal for the child and they are making progress toward that goal. You may have the child graph their progress and go over their performance with them
- It is important that the child does not become dependent on the self-monitoring intervention, especially since one of the key objectives of self-monitoring is to promote independence. Once the child has consistently met their goals and is able to independently and accurately self-monitor, the intervention should be faded
- Fade the intervention gradually and systematically in order to maintain their gains



- You may consider reducing the frequency of self-monitoring, increase the intervals/duration between each rating (e.g., set the MotivAider for 3 minute intervals instead of 1 minute intervals), reduce the quantity or frequency of reinforcement, or combine or reduce the number of items on their checklist

# Special Considerations: Troubleshooting

- Inaccurate self-monitoring may be due to a lack of insight or awareness of the target behavior or an intentional falsification to still receive a reward
- If your child is recording inaccurate data due to a lack of awareness, consider having another observer record data simultaneously and only provide reinforcement for the child matching the independent observer's data. You may need to set a lower expectation at first (e.g., they must match 60% of the time) then increase the criteria slowly until the child is able to accurately record their behavior. The independent observer may also provide feedback to the child on their performance during the observation or immediately following the observation. Eventually, you may fade this independent observer when the child is able to self-monitor their own behavior
- Self-monitoring interventions are not appropriate for all children. If your child is recording inaccurate data due to an intentional falsification or they are unable to self-monitor after receiving continued training, feedback, and matching an independent observer, self-monitoring may not be a suitable intervention and an alternative intervention may be necessary.
- Remember, self-monitoring should only be used for performance, not skill deficits

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### Appendix A: Interval Recording Template

Name:	Date:	Goal:
Instructions: When your <i>MotivAider/stopwatch/timer</i> goes off, circle “yes” if you are <i>target behavior</i> or circle “no” if you are not <i>target behavior</i> .		
1	Yes	No
2	Yes	No
3	Yes	No
4	Yes	No
5	Yes	No
6	Yes	No
7	Yes	No
8	Yes	No
9	Yes	No
10	Yes	No
11	Yes	No
12	Yes	No
13	Yes	No
14	Yes	No
15	Yes	No
16	Yes	No
17	Yes	No
18	Yes	No
19	Yes	No
20	Yes	No
21	Yes	No
22	Yes	No
23	Yes	No
24	Yes	No
25	Yes	No
26	Yes	No
27	Yes	No
28	Yes	No
29	Yes	No
30	Yes	No
Total #	____/____ x 100	____/____ x 100
Percent	= ____%	= ____%

## Appendix B: Interval Recording Template

Name \_\_\_\_\_ Date \_\_\_\_\_

Instructions: Mark + if you are target behavior or mark – if you are not target behavior when the MotivAider/stopwatch/timer goes off.

Interval	+ or -
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
Total #	_____/_____ x 100
Percent	= _____%

Name \_\_\_\_\_ Date \_\_\_\_\_

Instructions: Mark + if you are target behavior or mark – if you are not target behavior when the MotivAider/stopwatch/timer goes off.

Interval	+ or -
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
Total #	_____/_____ x 100
Percent	= _____%

### Appendix C: Interval Recording Example

Name \_\_\_\_\_

Date \_\_\_\_\_

Instructions: Each time the MotivAider goes off, place an X on the top tire if you are on-task or place an X on the bottom tire if you are not on-task.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	_/_	
																	_____
																	_____

Name \_\_\_\_\_

Date \_\_\_\_\_

Instructions: Each time the MotivAider goes off, place an X on the top tire if you are on-task or place an X on the bottom tire if you are not on-task.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	_/_	
																	_____
																	_____

Name \_\_\_\_\_

Date \_\_\_\_\_

Instructions: Each time the MotivAider goes off, place an X on the top tire if you are on-task or place an X on the bottom tire if you are not on-task.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	_/_	
																	_____
																	_____

Name \_\_\_\_\_



Date \_\_\_\_\_

Instructions: Each time the MotivAider goes off, place an X on the top tire if you are on-task or place an X on the bottom tire if you are not on-task.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	_/_	
																	_____
																	_____

Appendix D: Frequency Recording Template

Each time the MotivAider/stopwatch/timer goes off, put a tally mark in the "Yes" box if you are target behavior at the moment or put a tally mark in the "No" box if you are not target behavior.

<p>Yes</p>  <p>Total _____</p>	<p>No</p>  <p>Total _____</p>
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Appendix E: Frequency Recording Example

Name \_\_\_\_\_

Date \_\_\_\_\_

Instructions: Each time you talk-out without permission, put a tally mark in the Number of Talk-Outs box.

Class Period	Number of Talk-Outs
Total	

## Appendix F: Frequency Recording Chart

Name \_\_\_\_\_

Instructions: Starting at the bottom, place an X in a square each time you are out of seat without permission.































### Out of Seat without Permission

Number of Out of Seat Occurrences	25					
	24					
	23					
	22					
	21					
	20					
	19					
	18					
	17					
	16					
	15					
	14					
	13					
	12					
	11					
	10					
	9					
	8					
	7					
	6					
	5					
	4					
	3					
	2					
	1					
	0					
	Monday	Tuesday	Wednesday	Thursday	Friday	
	Day of the Week					

## Appendix G: Frequency Recording Example

Name \_\_\_\_\_



















































Instructions: Starting at the bottom, color in a cat or dog for each math problem completed at home.

#	Monday	Tuesday	Wednesday	Thursday	Friday
<b>8</b>					
<b>7</b>					
<b>6</b>					
<b>5</b>					
<b>4</b>					
<b>3</b>					
<b>2</b>					
<b>1</b>					

## Appendix H: Frequency Recording Example

Name \_\_\_\_\_

Instructions: Starting at the bottom, color in a soccer ball for every 5 minutes of independent reading.

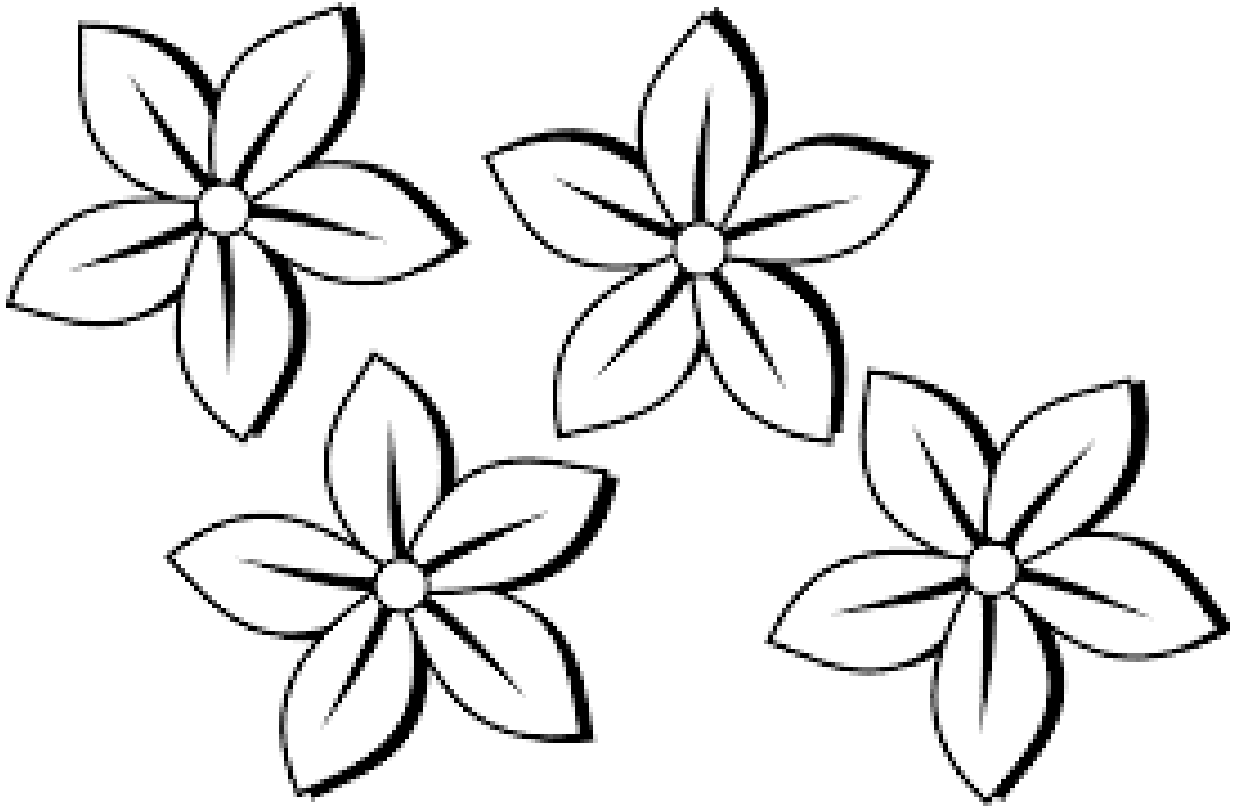
#	Monday	Tuesday	Wednesday	Thursday	Friday
<b>10</b>					
<b>9</b>					
<b>8</b>					
<b>7</b>					
<b>6</b>					
<b>5</b>					
<b>4</b>					
<b>3</b>					
<b>2</b>					
<b>1</b>					

Appendix I: Frequency Recording Example

Name \_\_\_\_\_

Date \_\_\_\_\_

Instructions: Color in a flower petal for each homework question answered.






Appendix J: Rating Scale Example




Name \_\_\_\_\_

Date \_\_\_\_\_

Instructions: At the end of each day, rate how well you followed the classroom rules from 0 to 10 with 0 being you never followed the rule and 10 being you followed the rule the whole time.

**Rule # 1:**  0   1   2   3   4    5   6   7   8   9    10











**Rule # 2:**  0   1   2   3   4    5   6   7   8   9    10

**Rule # 3:**  0   1   2   3   4    5   6   7   8   9    10



### Appendix K: Checklist Example

Instructions: Place an X under the “Complete” column once you finish each of the following steps.

Steps to get ready for school in the morning:		Complete?
1. Pick out clothes and get dressed.		
2. Fix your bed.		
3. Eat breakfast.		
4. Brush your teeth.		
5. Wash your face.		
6. Brush your hair.		
7. Put on your socks and shoes.		
8. Pack your backpack.		
9. Grab your lunch bag.		
10. Go to the bus stop.		

Appendix L: Behavior Contract Template

Name:	Date:
Target Behavior:	
Definition:	
How will I self-monitor?	
When will I self-monitor?	
Create or go over self-monitoring form	
Go over cueing system	
Goal/Criterion:	
Discuss how to graph progress	
Things I would like to earn for correctly self-monitoring and my goals: 1) 2) 3) 4) 5)	
Signature of Student:	