

Self-Monitoring

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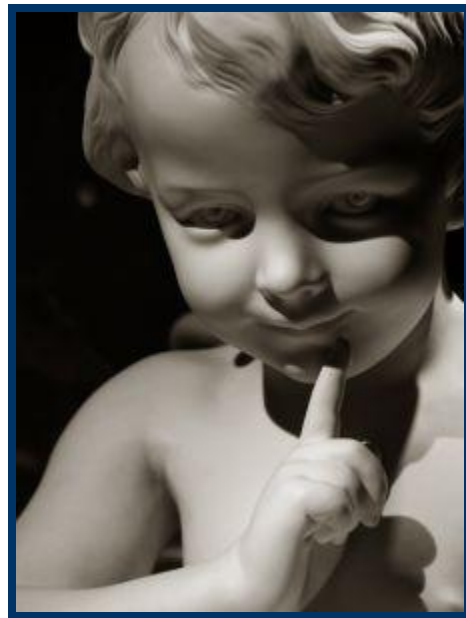


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What is self-monitoring?



Self-monitoring is an evidence-based intervention that encourages kids to monitor their own actions. Kids learn to ask themselves, “Am I doing what I should be doing?”

Self-monitoring is:

- Able to adapt to each child’s individual strengths
 - Easy to learn and teach to others
 - Discreet
- Useful in lots of different situations
 - Portable to other behaviors
- Handy, because the effects are long lasting
 - Inexpensive

Putting self-monitoring into action



Identify the target behavior

(e.g., inattention, inappropriate calling out, etc.)



Choose a self-monitoring system that the child is capable of using (e.g., checklist, smile-chart, etc.)



Choose a cue that is likely to work with the child (e.g., verbal prompting, a behavior, a kitchen timer, beeper, etc.)



Choose a reinforcer that is liable to work (e.g., praise, a preferred activity, etc.)



Teach the child how to use the system

(“When the timer beeps, check whether or not you are in your seat”)



As child learns to monitor, fade reinforcer, or require improved scores to receive reinforcer (‘Now that you’ve learned how to use your chart, you’ll only get computer time if you have more smileys than frownys’)

Glossary of terms

Fade – gradually remove

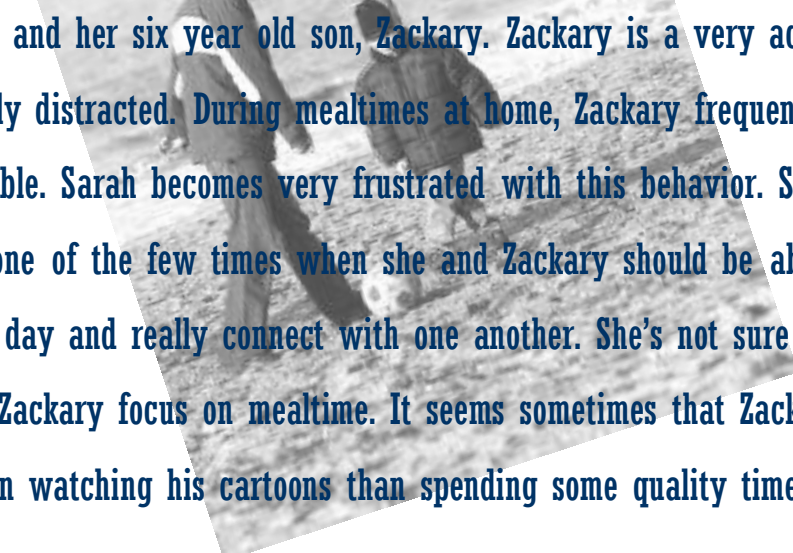
Monitor – pay attention to & record in some way
(for instance, a check in the yes or no column on a chart;
think of this as a “note to self”)

**Prompt – a reminder; something to motivate or give
incentive to a thought or action**
(e.g. when their watch beeps, the child checks whether
or not they are working on their homework)


Reinforcer – a reward of some sort
(such as praise from a parent, a favorite activity, or
a token of some sort – for instance, a sticker)

**Target Behavior – the behavior that one wants to
promote**
(for instance, completing homework assignments)

Case Study



Meet Sarah and her six year old son, Zackary. Zackary is a very active child, and is easily distracted. During mealtimes at home, Zackary frequently wanders from the table. Sarah becomes very frustrated with this behavior. She feels that meals are one of the few times when she and Zackary should be able to slow down their day and really connect with one another. She's not sure of what to do to help Zackary focus on mealtime. It seems sometimes that Zackary is more interested in watching his cartoons than spending some quality time with his mother.



Sarah has heard a teacher at Zackary's school speak about a method called self-monitoring.

From what Sarah's heard, it seems easy enough. She decides to try something like it.

Self-monitoring can help Sarah, but what would an intervention look like? First, she'd have to clearly define what it is she wants Zackary to do. This can be trickier than it sounds. The behavior has to be something that the child can clearly understand, and it is plain to decide whether or not it is being performed. Sarah decides to use staying at the table for an entire meal as the behavior she wants to encourage in Zackary. She and Zackary eat both breakfast and dinner together, so there will be two opportunities each day to use the intervention.

Now, Sarah needs to work out the system that Zackary can use to track his behavior. The system should be easy for the child to understand and use. Also, you don't want to break the bank with fancy materials if they aren't necessary. Sarah decides to use a simple chart with smiley-face stickers to mark a job-well-done. The chart is broken into days of the week, with a spot for both breakfast and dinner under each day. If Zackary sits through an entire meal, he gets to place a smiley sticker on the chart. Sarah and Zackary decide to hang the chart on the board beside the kitchen table, making it easy for Zackary to see and to reach.

Now the intervention must be taught, and run through some trials until it is clear that the child understands. Sarah has to offer some prompting for the first few trials, giving Zackary a little reminder, such as, "Did you sit through dinner?" Once the child becomes accustomed to the system, prompting should fade. Soon, Zack is using the chart independently, with only the occasional gesture from Sarah to remind him.

The results of the intervention can be charted, to give both the adult and child a visual measure of how the child is doing over time. Sarah decides to mark the total number of smileys on each week's chart and write it large and bold at the bottom of the sheet. That way, week to week results can be compared with just a quick look. As the charts add up, Sarah gets a binder for them. She calls it 'Zack's Smile Book', which they both enjoy.

When implementing a self-monitoring intervention, you should decide whether or not reinforcement will be used, and what it will look like. In some situations, a reward of some sort needs to be used to encourage the child to participate. Other times, a reward could be offered if a set goal is met. Sarah decides on both of these tactics. The smiley stickers are appealing to Zackary, and this small token encourages him to use the charts. The smile also reminds him that he's doing something positive. After it's clear that Zackary is able to use the system, Sarah offers Zack a half hour in the evening to watch his favorite cartoon show for every day that he sits through at least one entire meal. Reinforcements like this can be made more difficult to earn, or payoffs made more elaborate, once the child has mastered a goal.

How did it turn out?

When Sarah first heard about self-monitoring from a teacher at Zackary's school, she was skeptical. It seemed like wishful thinking to imagine Zackary deciding on his own to stay at the table. She's happy to say that Zackary is now sitting through both breakfast and dinner more often than not. Moreover, he continues to improve as the weeks go by. Zackary really seems to like the smile concept, and brings it up in other contexts, when he thinks he's done an exceptional job. Sarah is considering using this intervention for some other behaviors she'd like to see.



Frequently Asked Questions

Why does self-monitoring work?

Even without an incentive for positive performance, just stopping to think about they are doing can have a dramatic effect on a child's behavior. Self-monitoring helps build an effective inner dialogue that can lead to positive changes in other behaviors, as well.

What are some behavior goals that might be appropriate for a teenager?

You name it. Homework completion, extending the time a child can stay focused on a task, putting clothes and other belongings in their proper place. As long as a desirable behavior can be identified, defined, and realistically carried out, it can be fit into a self-monitoring intervention.

Can a teacher or parent begin monitoring and then allow the child to take over?

Of course. In any self-monitoring intervention, control shouldn't be handed off to the child until they can realistically carry out what is expected of them.

Why did my child start acting out when I started this intervention?

This could mean that the target behavior is something that the child isn't really capable of performing consistently. You may want to rethink the target behavior.

Does self-monitoring work with children with behavioral disabilities?

Some people remain skeptical about using a self-monitoring intervention with children

with behavioral disabilities. While this is a legitimate concern and intervention should be considered on a case-by-case basis, there is a significant evidence base for the effectiveness of self-monitoring with diverse populations. In other words, don't rule out self-monitoring on this basis alone.

Do I need to offer a reward?

With the mention of reinforcement earlier, you may be wondering whether reward is an essential part of self-monitoring. It is not. There is evidence to support the use of reinforcement as an effective addition to self-monitoring, but, again, this should be considered on a case-by-case basis.

Will using this make my child stand out?

If a teacher is implementing a self-monitoring intervention in a classroom, parents may be concerned that the child will stand out in a negative way. This concern can be addressed in the design of the intervention. Self-monitoring can be implemented very tactfully.

What if my child starts to become bored?

With many interventions, there is the concern that the child may, over time, become bored with the process and give up. This can be addressed by changing things up when necessary. Add or change a reward; make earning a reward more difficult, change the design of the system. Any number of components can be tweaked to keep a child interested. Parents know their child best, and will very likely be able to judge when it's right to shake things up.

I've heard of terms like "self-management" and "self-evaluation"? Are they the same thing as self-monitoring?

They are related, but not the same. Self-management is a broad term for all of the strategies that encourage individuals to become more self-sufficient. Self-monitoring is one of the specific methods that is included under the umbrella of self-management. Self-evaluation involves comparing one's behavior to a set standard. It's similar to self-monitoring, but where self-monitoring asks, "Am I doing what I should be doing?", self-evaluation asks, "How does what I'm doing compare to the standard?"

Annotated Bibliography

Heiman, T. (2002). Parents of children with disabilities: Resilience, coping, and future expectations. *Journal of Developmental and Physical Disabilities, 14*(2), 159-171.

Dr. Tali Heiman is a researcher for the Research Center for the Integration of Technology in Education at the Open University of Israel. Her areas of interest are education, as well as the learning-styles, emotional and social coping strategies of children, and the issues of families of children with special needs. This study interviewed 32 parents in their homes, each family having one special needs child in the home, with disabilities ranging from intellectual difficulties (e.g., autism, Down's syndrome, etc.) to learning disabilities to physical disabilities (e.g., cerebral palsy). The study's principal focal point is to establish the issues that help and hinder the ability of this particular population of families to maintain something close to a typical everyday life and the nature of parent resilience in such circumstances. The study examined the past issues of the families (e.g., when suspicions arose about the presence of a disability, reactions to the diagnosis, etc.), to present issues (e.g., child-rearing concerns, the services used by the families, etc.), and finally, future concerns for the participants (e.g., parent expectations/apprehensions and plans for the child's future wellbeing). Most parents were found to have had negative responses to their child's diagnosis, and that the life changes necessary to accommodate the circumstances had been difficult. Support systems – from extended family members to social workers, educators and other extra-family supports – were found to help the families build and maintain resilience. Participants emphasized an outlook of acceptance of the child with difficulties, and held an optimistic view of the future. Open dialogue among family members and their support structure, positive bonds between the parents, and a strong and consistent support system were found to be the main factors allowing families to “to function ‘in a resilient way’” (Heiman, 2002). This study is significant because it indicates the variety of supports that families with special needs can most benefit from, providing a good starting point for intervention programs dealing with this population.

Hoff, Kathryn E., Doepke, Karla J., Amato-Zech, Natalie A. (2006). Increasing on-task behavior in the classroom: Extension of self-monitoring strategies. *Psychology in the Schools*, 43(2), 211 - 221

Dr. Kathryn Hoff and her colleague, Dr. Doepke, are both University of Illinois associate professors in the psychology department. Both pursue research into autism. Dr. Hoff's research also focuses on interventions for advancing social and behavioral outcomes, and peer relations. In this study, the researchers worked with Natalie Amato-Zech, a professional in Positive Behavior Interventions and Supports (PBIS) for Community Consolidated School District 59 in Illinois. The study appears to be the first to evaluate the efficacy of an electronic tactile prompting device called the MotivAider (essentially, a vibrating beeper set to go off at timed intervals) for self-monitoring uses. A web search indicates that these devices are still in use today for behavioral maintenance. The primary purpose of the study was to determine the utility of a minimally disruptive electronic device, such as the MotivAider, as a tool for self-monitoring. The study included direct observations of students' on and off-task behavior in school; the students were all fifth graders judged by teachers to have low levels of on-task behavior. Each student was assessed for baseline behavior before training in self-monitoring. After the subjects were familiarized with self-monitoring procedures, the MotivAider-facilitated self-monitoring intervention began. Every three minutes, the device would vibrate, as a reminder to the student to evaluate their behavior/attention. The intervention was introduced in phases, and between each phase the behavior of the subjects was observed minus the intervention. The study found that each student's on-task behavior increased significantly upon introduction of the intervention. On-task behavior decreased between each phase of the intervention, but the level of overall on-task behavior increased steadily for all subjects across the span of the study; meaning that each intervention phase showed increases from the last, and that the intervention-free periods following each intervention phase, while still showing slightly less on-task behavior, also improved over the course of the study. This study is helpful as it illustrates the effectiveness of a fairly unobtrusive self-monitoring tool in a typical classroom setting. A device like the MotivAider would seem less disruptive of the classroom experience to both the user and others in the classroom than more intrusive self-monitoring tools and methods in use in recent years - such as devices with headphones, tones audible to the entire class and teacher prompting.

Rafferty, L. A. (2010). Step-by-step: Teaching students to self-monitor. *TEACHING Exceptional Children*, 43(2), 50-58.

Dr. Rafferty is an assistant professor in the Exceptional Education Department at the State University of New York at Buffalo. Her work focuses on educational strategies, specifically for use with students with emotional difficulties, and is the author of a recent book on the topic of self-monitoring. This article gives a brief but instructive overview of five commonly utilized self-management strategies (self-monitoring, goal setting, self-evaluation, self-instruction, and strategy instruction). Generalized uses, benefits and targets of these strategies are summarized. A powerful impression is left that self-management interventions are useful tools in a wide variety of situations. From there, the article provides a more detailed description of the specific strategy of self-monitoring, and how to implement a self-monitoring intervention in a classroom. Implementation is delineated into eight steps, and each is given a thorough summary. This article is useful as an overview to the topic of self-monitoring. Moreover, the references cited in the article provide a strong starting point for more meticulous study of the subject. Perhaps the most useful aspect of the article is its engaging language and unique narrative style. The article opens and closes with a short vignette about “Mr. Payton”, a composite of teachers in need of useful strategies to help their students begin to learn to manage their own behavior and performance. The article begins with Mr. Payton identifying his need for intervention, and ends with Mr. Payton implementing a simple and ultimately successful self-monitoring intervention in his classroom. This is an effective method of illustrating the points made in the heart of the article, and making them easily relatable to the reader.

Reid, R., Trout, A. L., & Schartz, M. (2005). Self-regulation interventions for children with attention Deficit/Hyperactivity disorder. *TEACHING Exceptional Children*, 71(4), 361.

Dr. Robert Reid and doctoral student Michalla Schartz are both affiliated with the University of Nebraska. Dr. Reid’s areas of specialization include self-monitoring, attention disorders and learning disabilities. Dr. Alexandra Trout is an assistant research professor at the University of Iowa, focusing on emotional and behavioral disorders and interventions for at-risk youth. This is a meta-analysis of 16 peer reviewed studies that each examined one of four self-regulation interventions (self-monitoring, self-monitoring plus reinforcement, self-reinforcement or self-management) used with children (primarily elementary-school children), and each dealing with interventions that dealt with behaviors commonly associated with ADHD (e.g., disruptive behaviors, on/off task behaviors, etc.). The purpose of this review was to examine the effects of commonly used self-regulation interventions on the population of children with ADHD. While the study has admitted confounds (limited number of subjects that qualified for inclusion in the review, small number of female participants, small number of children over 12 years of age, etc.), it was found that self-regulatory interventions did show consequential improvements for behaviors commonly associated with ADHD. Also, while the analysis was not intended to

compare the strength of interventions to each other, it is suggested that self-monitoring and self-monitoring plus reinforcement showed the most profound effects. This study is an important inclusion because of its implication for the use of self-monitoring interventions with the population of children with attention-deficit disorders.

Soares, D.A., Vannest, K. J., & Harrison, J. (2009). Computer aided self-monitoring to increase academic production and reduce self-injurious behavior in a child with autism. *Behavioral Interventions*, 24(3), 171.

The researchers in this study are all affiliated with Texas A & M University. Denise Soares is a project coordinator in the educational psychology department. The study included a single participant, a 13-year-old boy diagnosed with Asperger's Syndrome who displayed several behaviors distractible to himself and disruptive to others, and was reported to have severe tantrums which included self-injurious conduct. These behaviors seriously impaired his ability to attend integrated classes. The participant's ability to complete an academic task, as well as the intensity of his tantrum behaviors were assessed. The study was chiefly concerned with the effect of the self-monitoring intervention on these criteria. Baseline behavior was assessed. Following this, the participant was given a short training on the self-monitoring procedure - use of a computerized "sticker-chart", where the participant would move a virtual sticker to a chart to indicate completion of each task. The intervention took place in two identical phases, with a second baseline taken between phases. The study found that, for this participant, the self-monitoring/self-recording intervention improved on-task behavior, leading to increased academic performance. Moreover, the focus on the intervention served to mediate the child's tantrum behaviors. The improvement was steady across intervention phases, and the second baseline showed improvement from the first, indicating maintenance of self-regulation skills. While one should be dubious of any study comprised of a sample size of one, this study is included to point toward a future avenue of research on this topic, and, if nothing else, provide an interesting case study in the efficacy of self-monitoring even in cases where severely maladaptive behaviors are present.

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Discussion questions

What are some behaviors that you'd like to encourage in your child?

What kind of intervention design do you think would work best with your child? For instance, would you use a sticker chart, like in the case-study, a computer-based system like the one used in the Soares, et. al. (2009) study, or maybe something completely different?

If you used a reinforcer in your design, what kinds of things do you think would be most effective?

If you wanted to find more information on self-monitoring or other evidence-based strategies, where might you start your search?