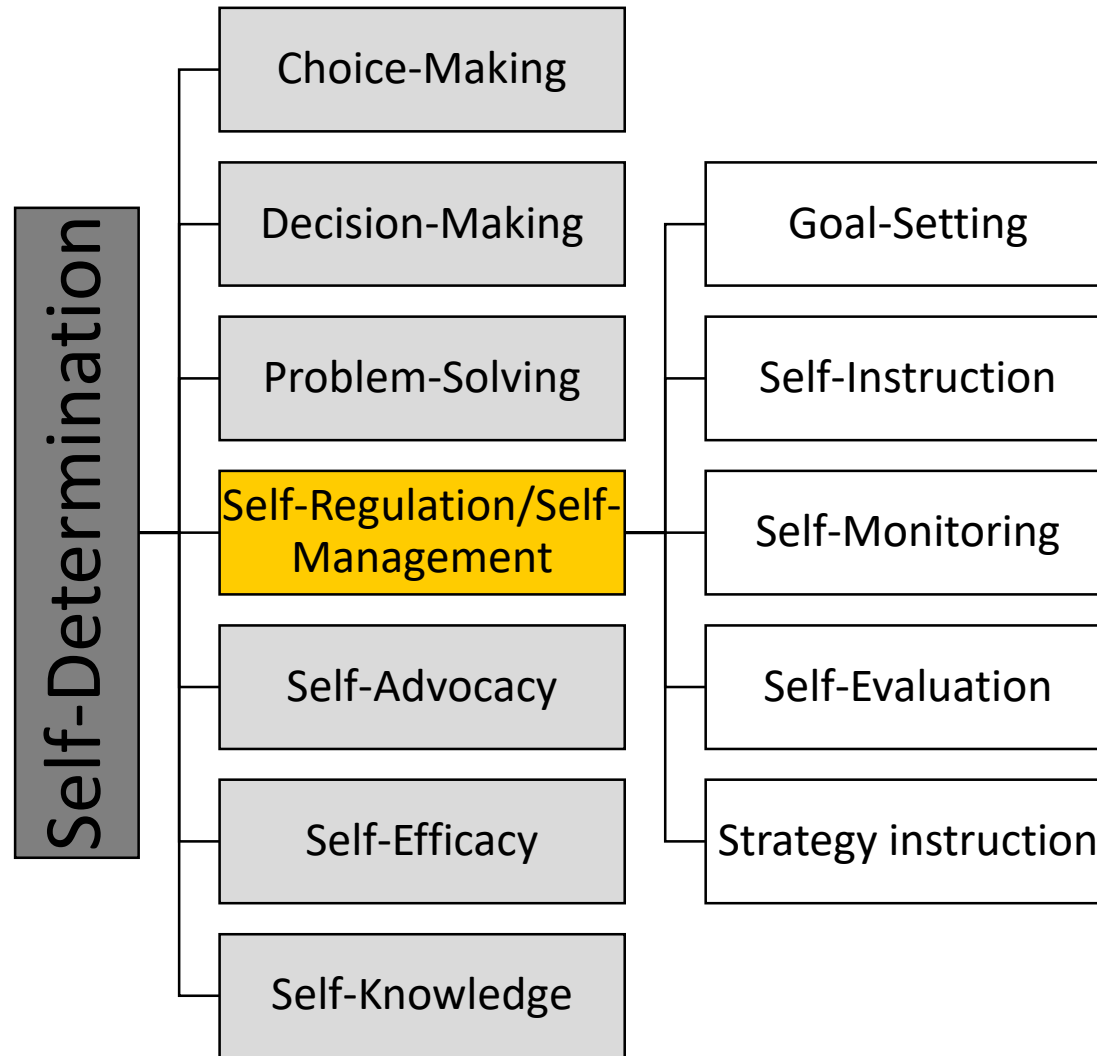


I-Connect: A Self-monitoring Intervention to Support Secondary Students Utilizing a Mobile Application



Dr. Howard Wills, University of Kansas
HPWILLS@KU.EDU

A focus on self-regulation/self-management



What strategies
do you use in
your own life?
How do you help
your students
self-manage?



www.ebi.missouri.edu



University of Missouri

School Psychology at Mizzou IU ECU Special Education at Mizzou



Self-Management

2013-04-08 07:54:19 Acquisition Interventions: The student needs help learning the appropriate behavior, Proficiency (Gets Something) Interventions: The child gains something (e.g. attention) when they engage in the problem behavior.

Although there is a wealth of existing behavioral interventions, many rely solely on teacher implementation, require significant attention, and may be difficult to apply consistently (Briesch & Chafouleas, 2009). In contrast, self-management interventions make students responsible for tracking their own behavior. At the core of self-management, is self-monitoring where students are provided with the definitions of target behaviors and prompted to record their performance during instruction. By becoming aware of their own behavior, students are given the opportunity to recruit naturally occurring reinforcers. Several components are often used in addition to self-monitoring including goal setting, self-charting, and self-evaluation paired with reinforcement (Briesch & Chafouleas, 2009).

- Full Intervention Brief: [Self-Management](#)

Comments (0)

« Video Modeling and Video Self-Modeling for Students with Autism Spectrum Disorders

Choice Making »

Comment Closed

Evidence Based Intervention Network

Enter Keyword..

Navigation and More

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[History of the EBI Network](#)
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[Project Contributors](#)

Evidence Based Intervention Section

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[What are Evidence Based Interventions \(EBI\)?](#)
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Evidence Based Assessment Section

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RTI Resources

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[EBI Training Webinars](#)
[Intervention FAQ](#)



What is self-monitoring?

OBSERVE AND RECORD

A large, multi-pointed starburst graphic with a gradient from yellow at the top to blue at the bottom. It is centered on the slide and contains the following text:

A research-based
intervention
demonstrating positive
effects across age,
gender, disability, and
setting



Example of “in the moment” self-monitoring: Are you in your seat right now?

Behavior: In Seat		
Interval	Yes	No
1:00	X	
2:00	X	
3:00		X
4:00	X	
5:00		X
6:00	X	
7:00	X	
8:00	X	
9:00	X	
10:00	X	
Total	80%	20%

Goal: During math class, Juan will be in his seat for 80% of intervals each day for a week.

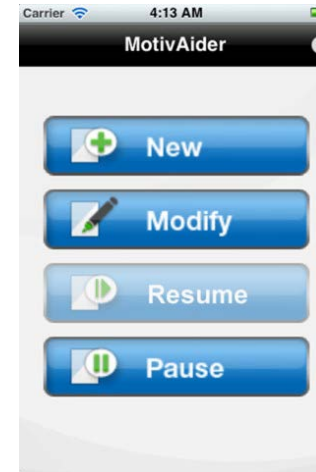


Example of “**retrospective**” self-monitoring:

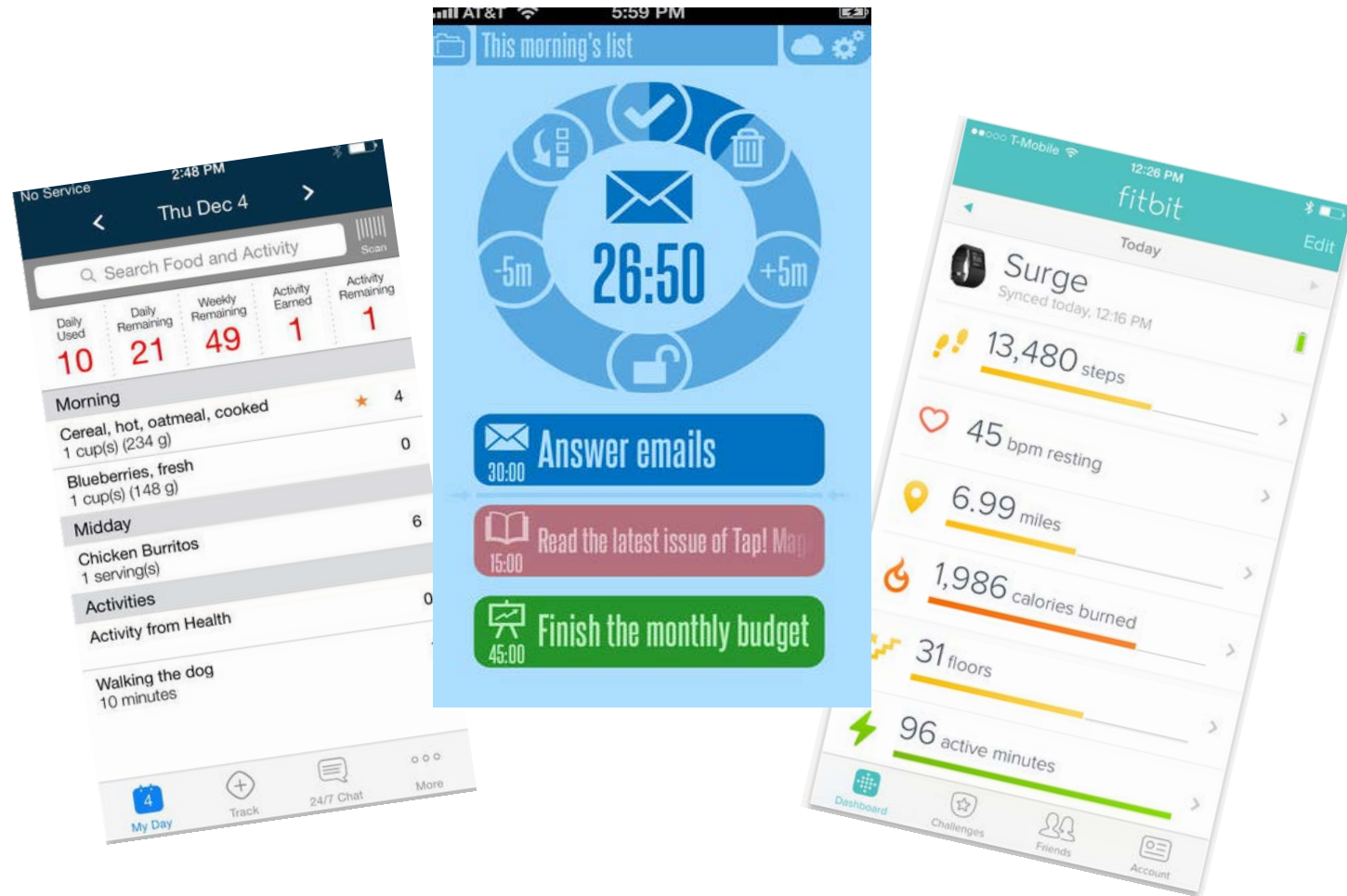
During Math Rate How Well Stayed in your seat...

The Role of Technology

- Prompting devices:
 - helpful for cueing, but not collecting data



We use technology to self-monitor so many other things...why not behavior in schools?



What can we learn from the medical field?

Technology-based self-recording interventions, involving making an observation and recording a behavior, have been used in applications focusing on...

Weight Loss

Turner-McGrievy, Beets, Moore, Kaczynski, Barr-Anderson, Tate, 2013





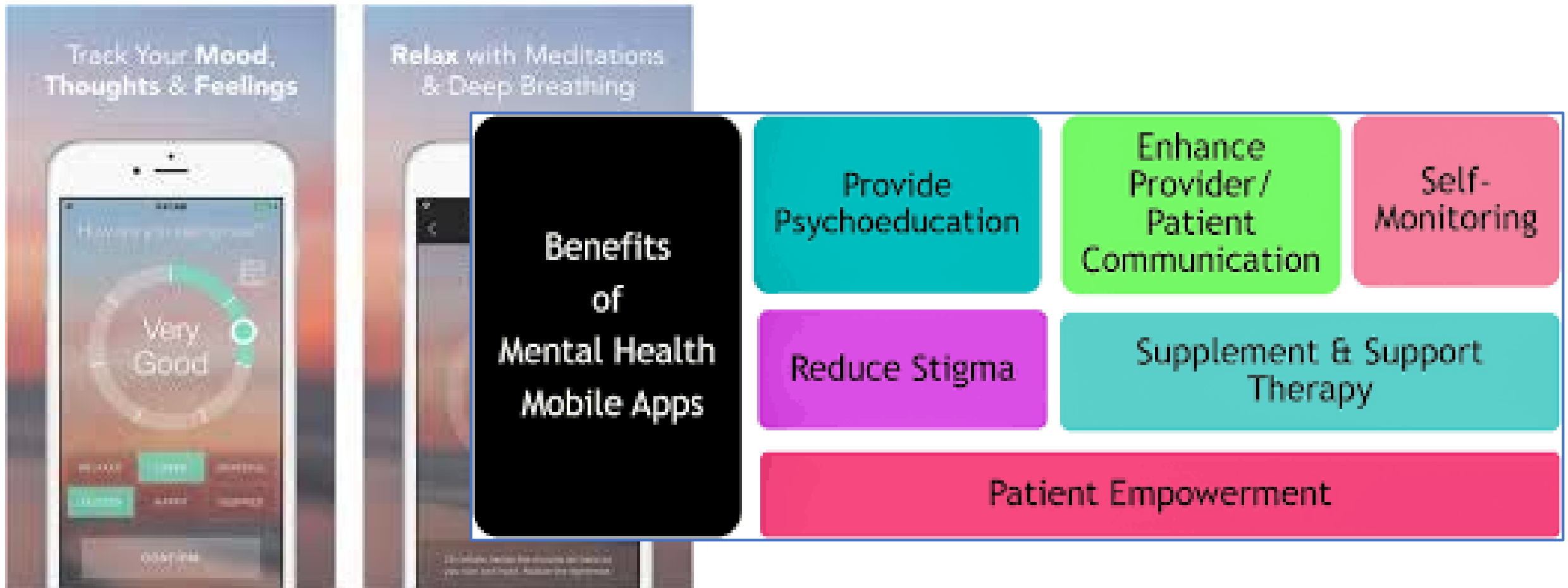
Diabetes Management

Levine, Burns, Whittle, Fleming, Knudson, Flax, & Leventhal, 2016



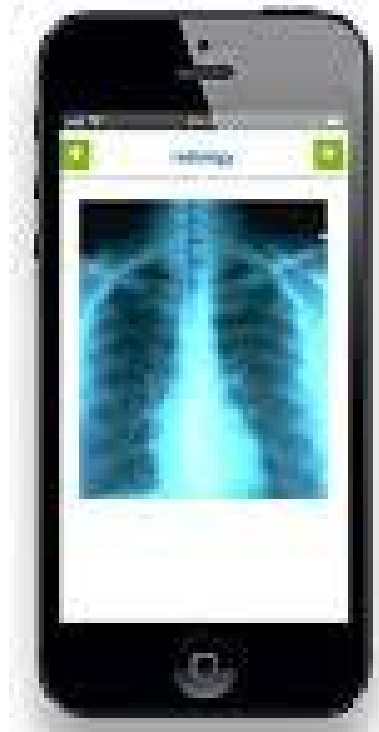
Mental Health

Kauer, Reid, Crooke, Khor, Hearps, Jorm, & Patton, 2012



Physical Activity and Health Records

(Burke, Wang, & Sevick, 2011) (Häyrinen, Saranto, & Nykänen, 2008).



BENEFITS

Health Care Professionals	Patients
Real-time patient care data	Real-time feedback
Another means of communicating...	Reminders
Data over time	Goal-tracking
Increased Patient Accountability	Accountable and Supported

WEARABLE DEVICES

- Real-time feedback
- Prompts to get up and move
- Upload activity data to the web and produce simple graphs and charts for users to monitor progress
- Connect! (Share and Join a Community)





Learning from the Medical and Health Fields

Piette (2007) Recommendations:

- “Look before you leap (but do not forget to leap)” (p. 2428).
- “One size does not fit all” (p. 2428).
- “Beware of “cool apps” (applications)” (p. 2428).
- TBSM, “is most effective when it supports human contact” (p. 2428).

Emerging TBSM in Education



ASD ON THE GO >>>



NATIONAL INSTITUTE ON DISABILITY,
INDEPENDENT LIVING, AND
REHABILITATION RESEARCH

NIDILRR

Grant #90DP0058

www.asdonthego.ku.edu



I-Connect

*Stepping Up Technology Enabled Self-Monitoring for High School
Students with Disabilities.*

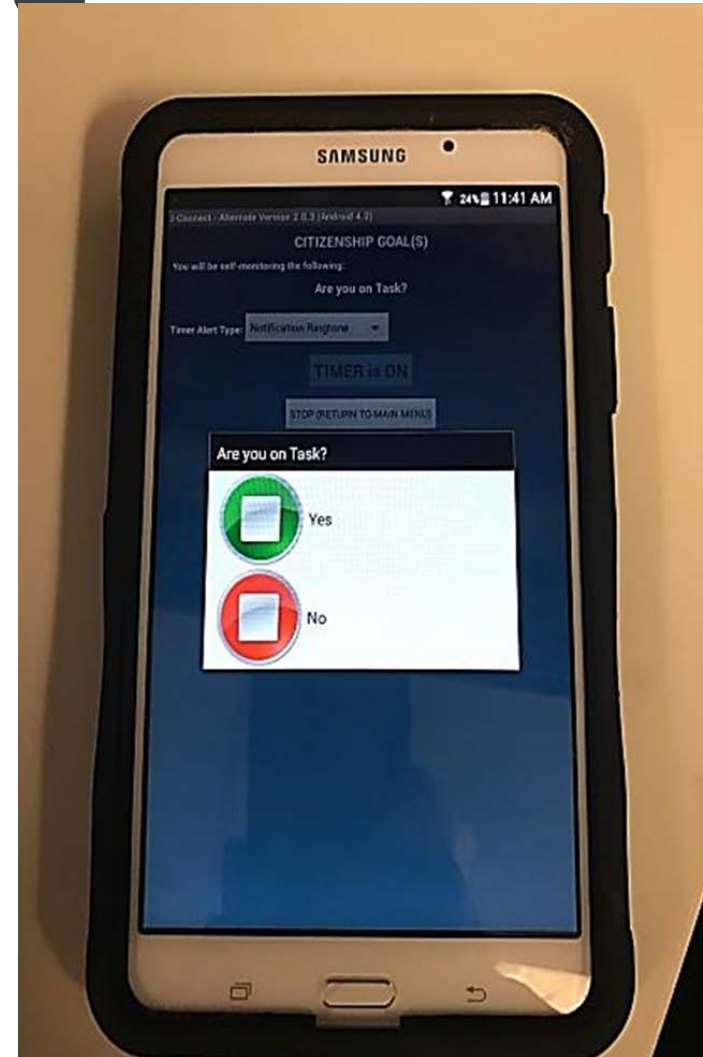
Office of Special Education and Rehabilitative Services

Award: H327S170001

www.iconnect.ku.edu

I-Connect

www.icconnect.ku.edu

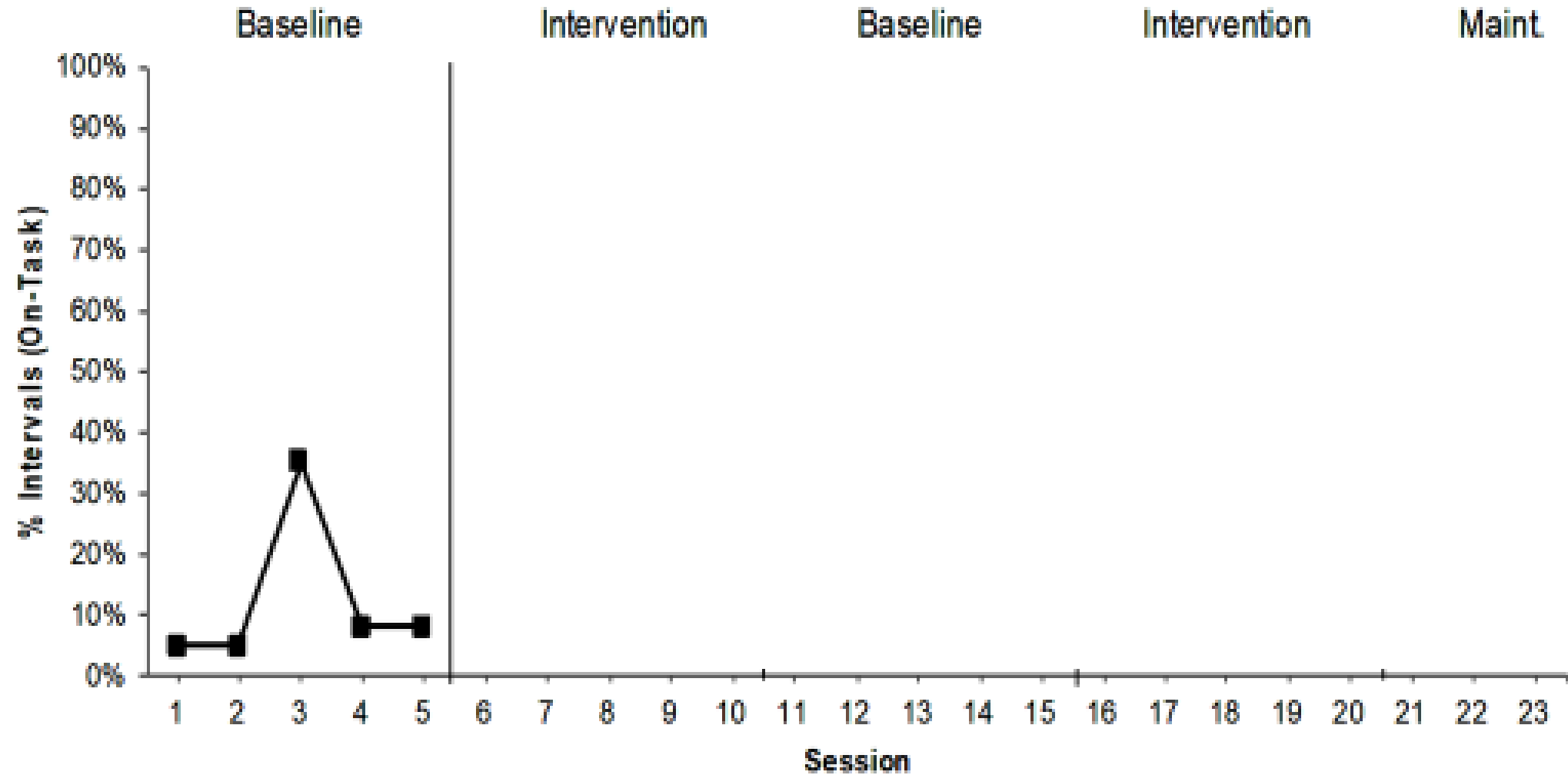


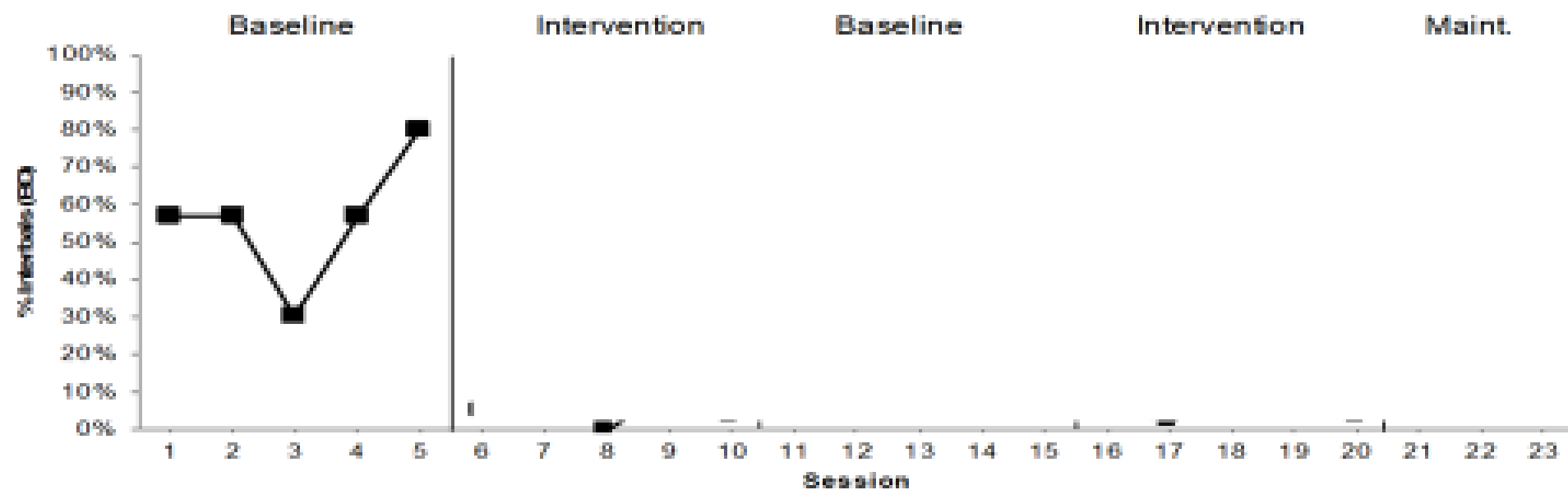
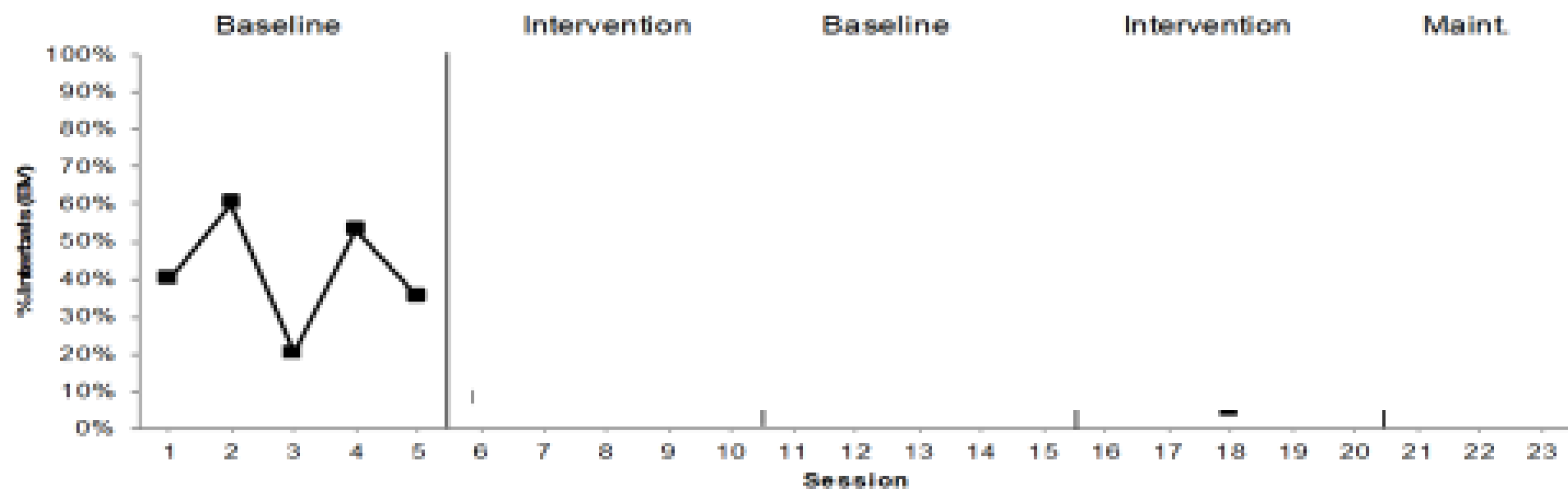


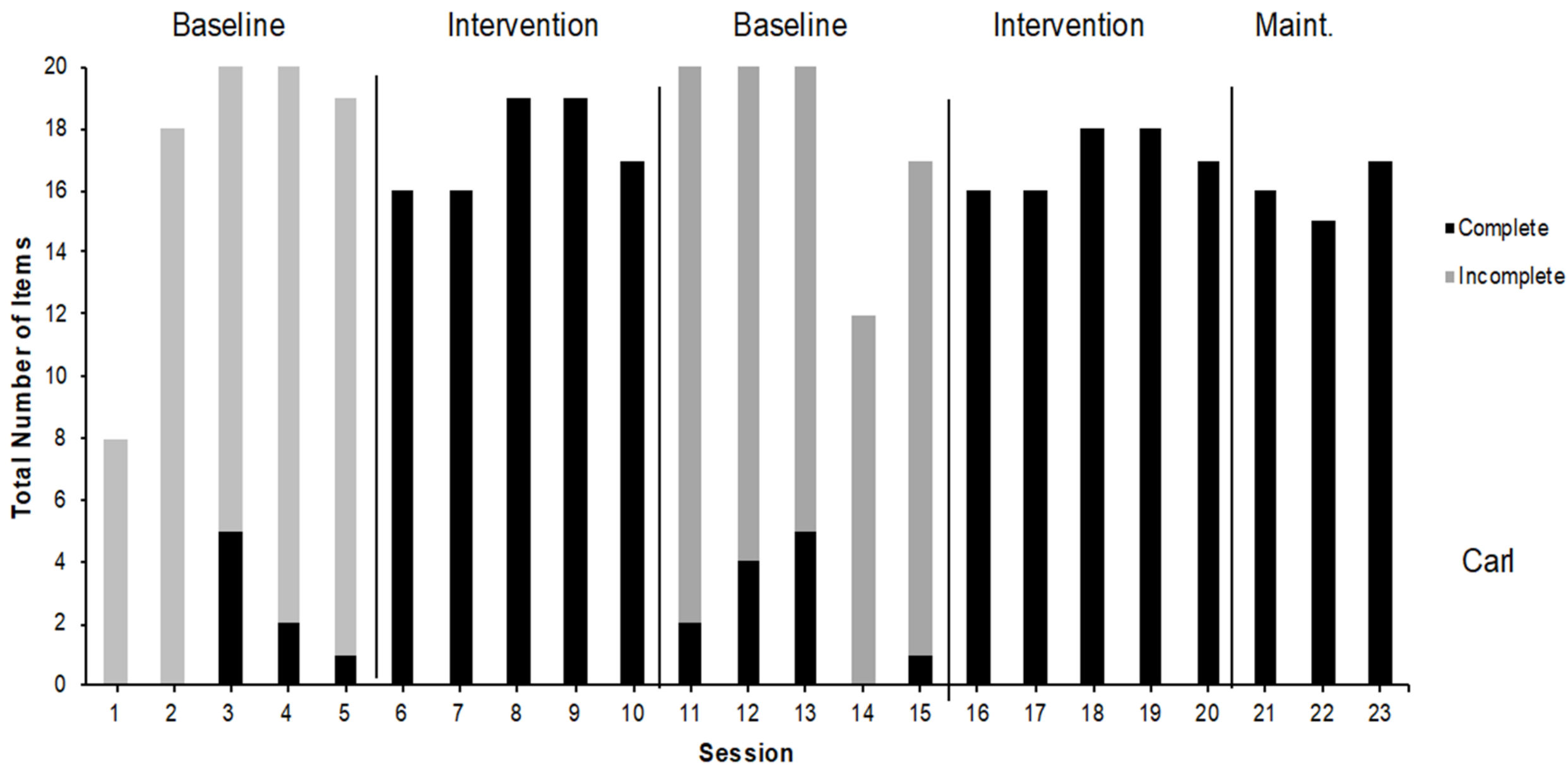
Some studies supporting the use of I-Connect

- Clemons, L. L., Mason, B. A., Garrison-Kane, L., & Wills, H. P. (2016). Self-monitoring for high school students with disabilities: A cross-categorical investigation of I-Connect. *Journal of Positive Behavior Interventions*, 18(3), 145-155.
- Rosenbloom, R., Mason, R. A., Wills, H. P., & Mason, B. A. (2016). Technology delivered self-monitoring application to promote successful inclusion of an elementary student with autism. *Assistive Technology*, 28(1), 9-16.
- Crutchfield, S. A., Mason, R. A., Chambers, A., Wills, H. P., & Mason, B. A. (2015). Use of a self-monitoring application to reduce stereotypic behavior in adolescents with autism: A preliminary investigation of I-Connect. *Journal of Autism and Developmental Disorders*, 45(5), 1146–1155.
- Wills, H. P., & Mason, B. A. (2014). *Implementation of a self-monitoring application* to improve on-task behavior: A high school pilot study. *Journal of Behavioral Education*, 23(4), 421-434.

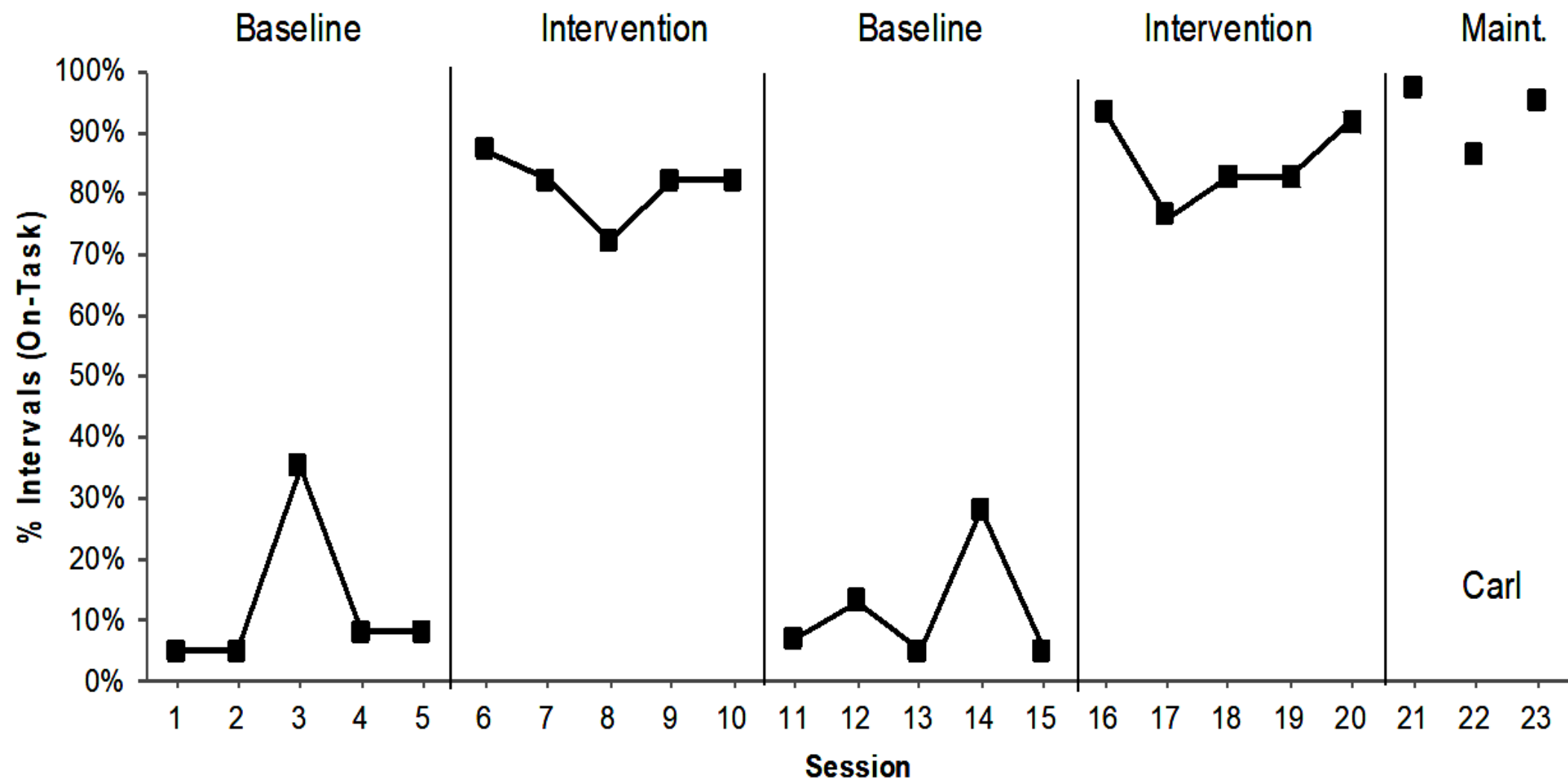
Carl

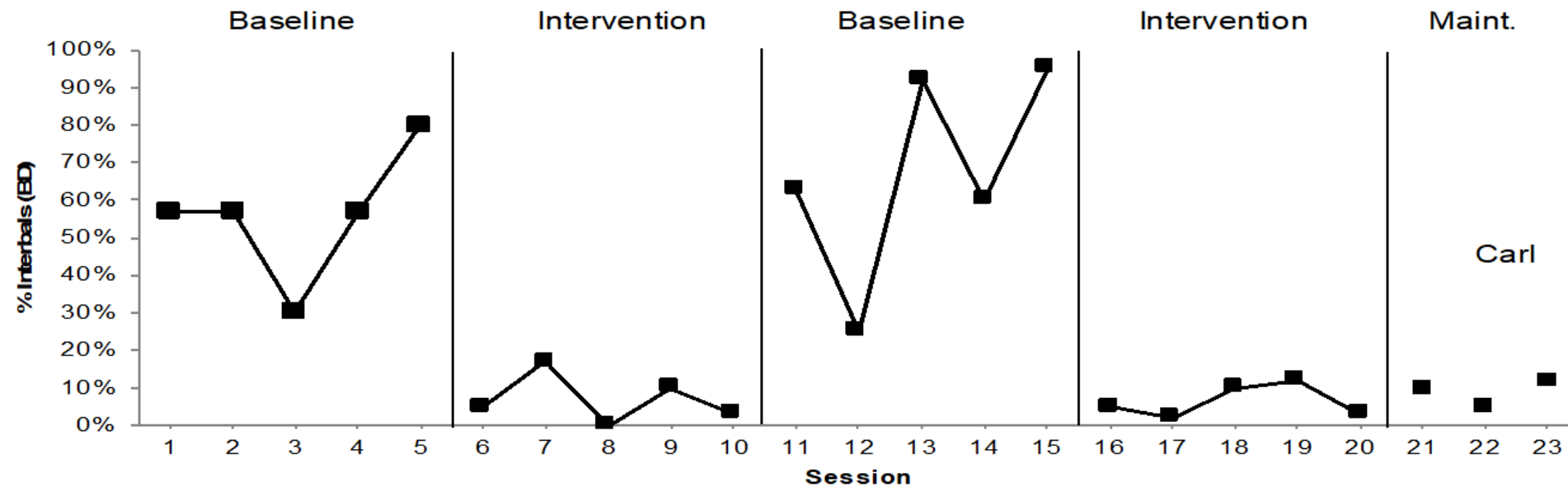
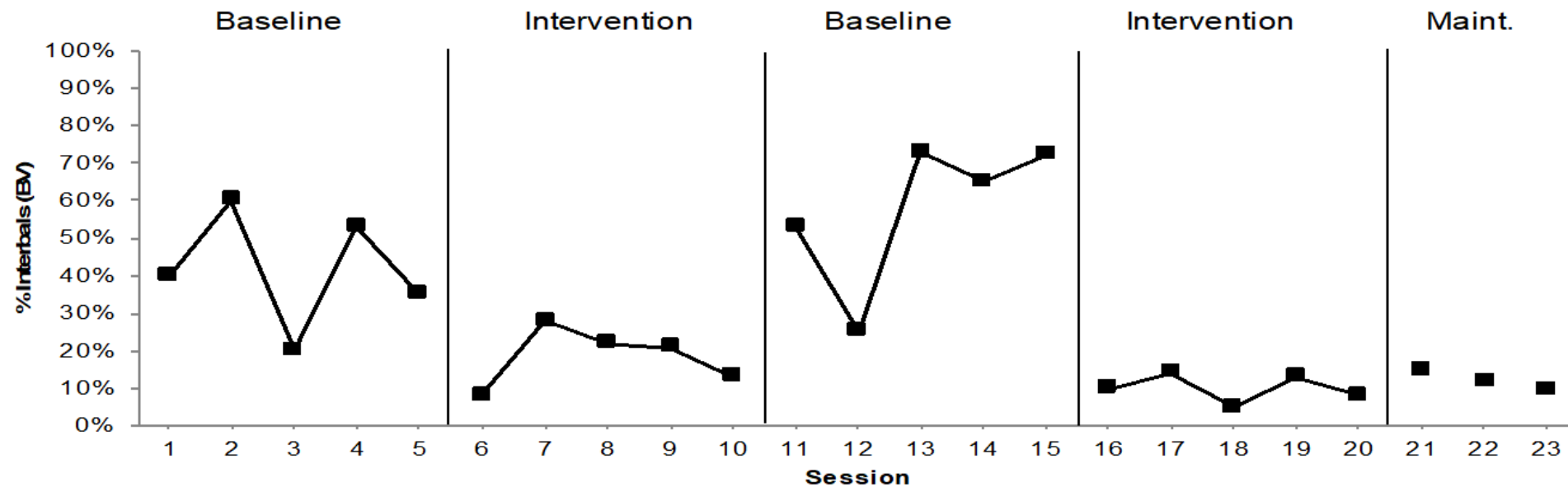


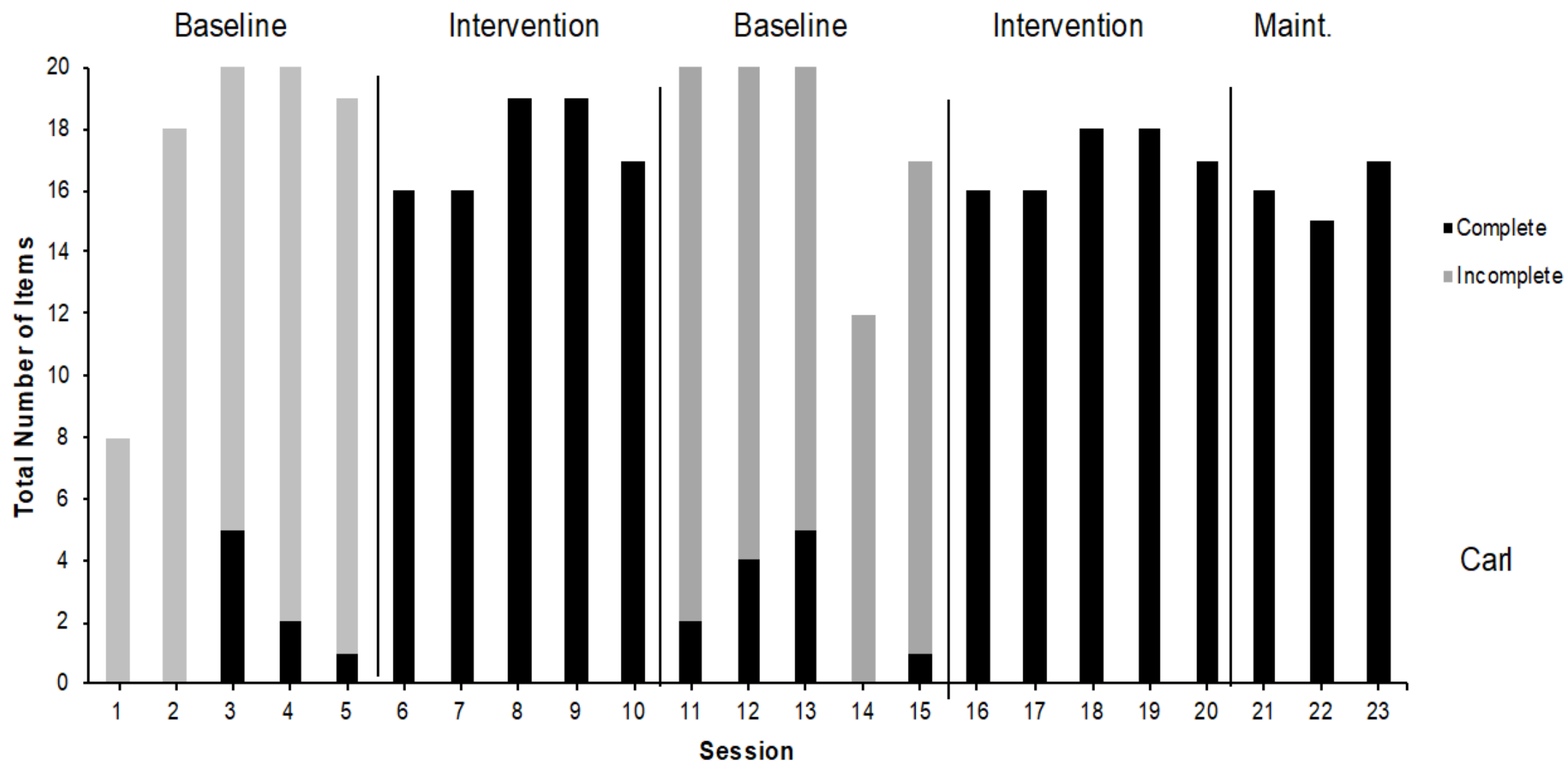




Carl



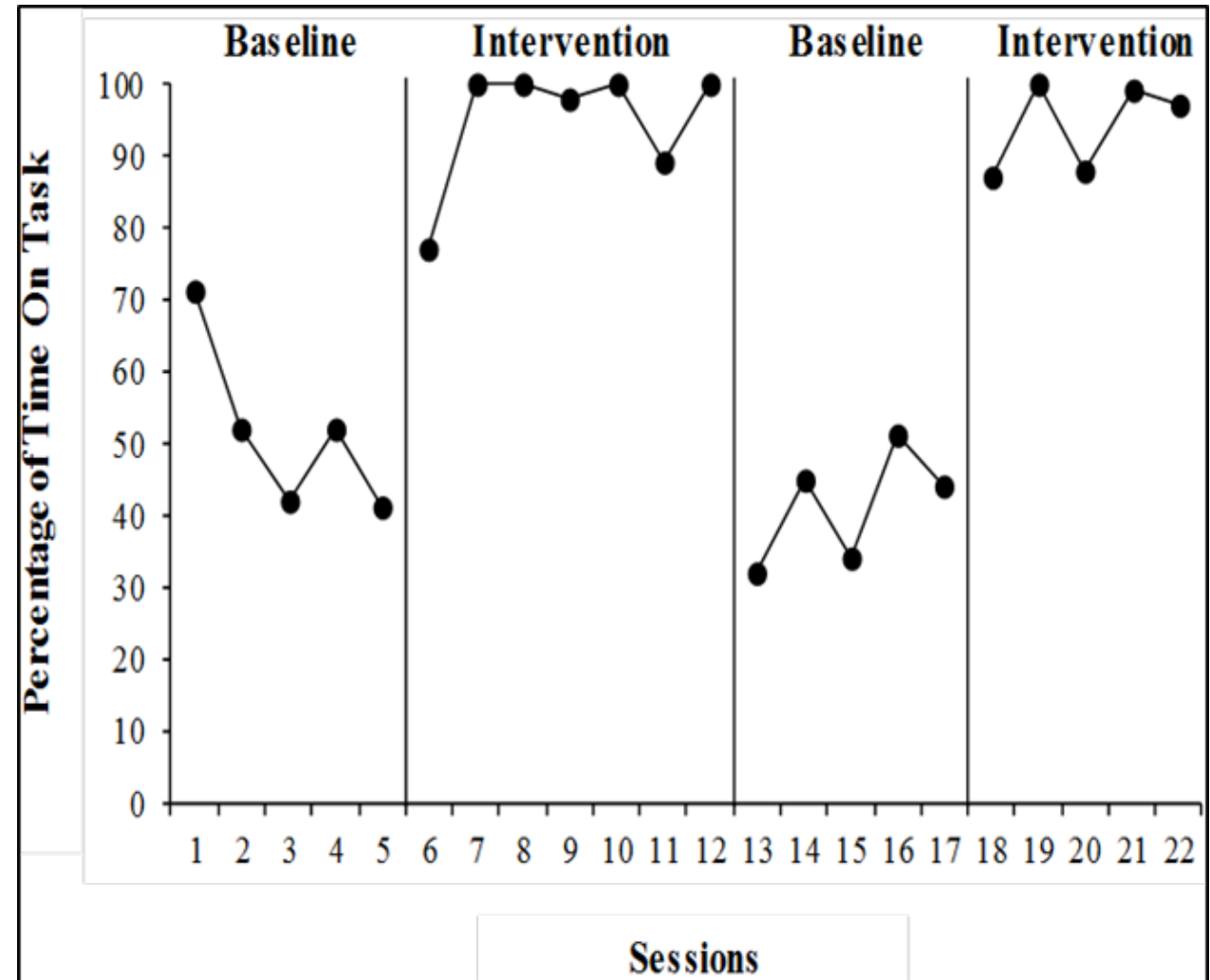




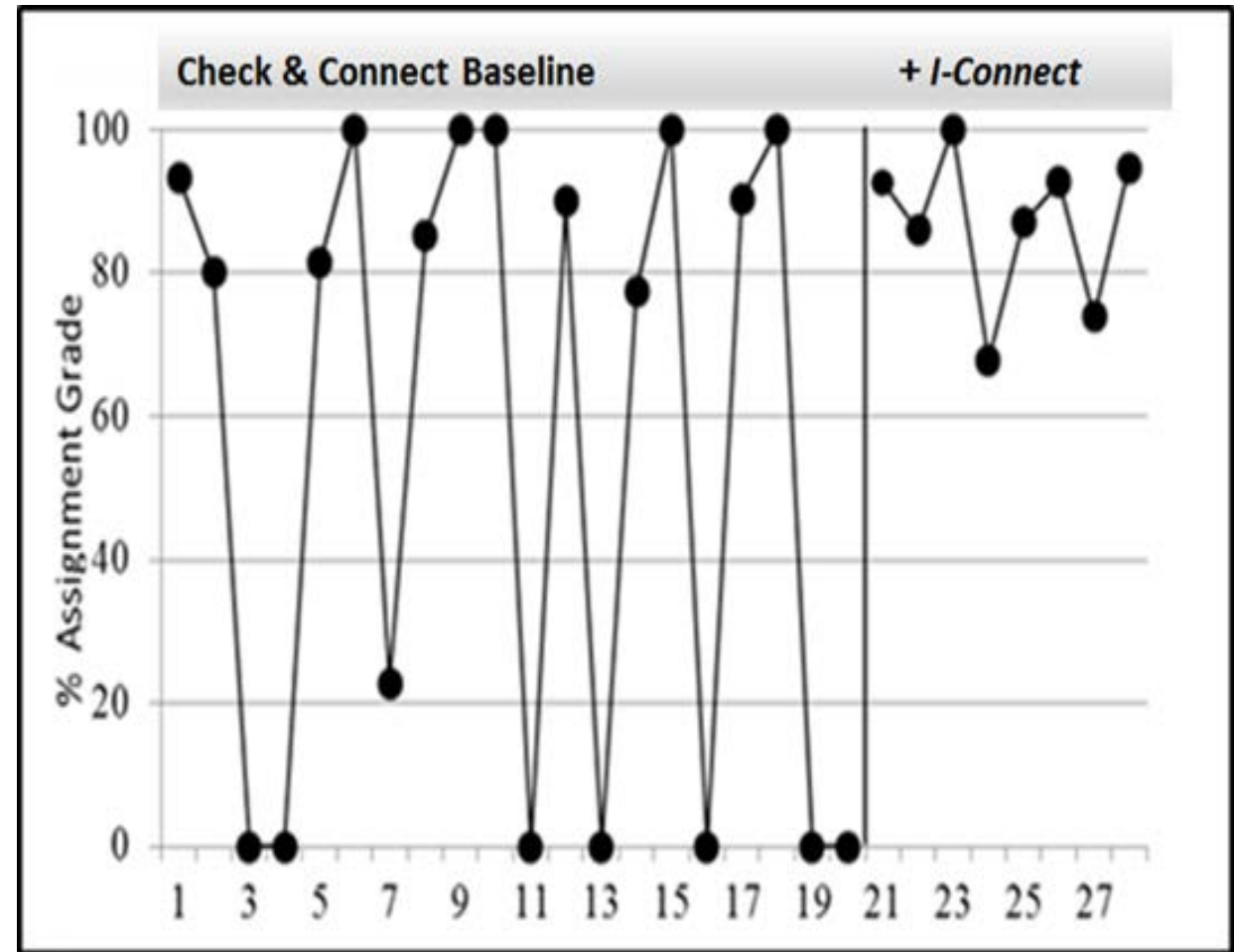
Carl

EVEIDENCE OF THE TECHNOLOGY'S EFFECTIVENESS FOR TARGETED POPULATION

I-Connect as a single component intervention to improve academic on-task behavior in a general education Biology class for a high-school student with LD and another with ADHD. Both students responded to ***I-Connect*** with immediate improvements

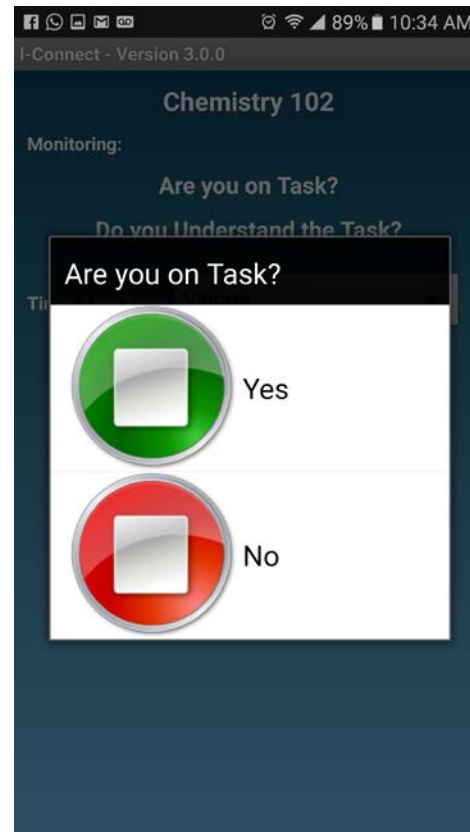


I-Connect was employed as an enhancement to school-based mentoring for a high-school student with a LD who was failing chemistry in an inclusive classroom. The intervention resulted in improvements in on-task behavior and assignment completion with improvements in class grades



Technology-based Self-Monitoring (TBSM)

- Self-monitoring: self-recording the occurrence or non-occurrence of a behavior
 - Examples:
On-task?
Appropriate?



Self-Monitoring for High School Students With Disabilities: A Cross-Categorical Investigation of I-Connect

Lachelle L. Clemons, MEd¹, Benjamin A. Mason, PhD²,
Linda Garrison-Kane, PhD¹, and Howard P. Wills, PhD²

Abstract

Self-monitoring interventions are well supported within the empirical literature as improving for students with disabilities. However, studies implementing self-monitoring interventions in high schools are rarely conducted despite their potential to improve student academic and behavioral outcomes. An unobtrusive, self-monitoring application loaded on a handheld device, classroom engagement and academic benefits were assessed in a withdrawal design for three high school students with different disabilities (intellectual disability, autism, and intellectual disability) in varied instructional arrangements. Direct observation of the self-monitoring intervention as effective in improving classroom engagement for all three students during intervention phases.

Keywords

self-management, classroom, intervention(s), adolescent, positive behavior support(s)

High school students with disabilities represent a critically underserved population for intervention research. Despite advances within school-wide positive behavior support (SWPBS) literature (Bradshaw, Mitchell, & Leaf, 2010; Lewis & Sugai, 1999; Sugai & Horner, 2009), the majority of studies investigating universal and secondary behavioral interventions have been conducted within elementary classrooms. Structural characteristics common to high school settings may contribute to the lack of empirical research. First, high school teachers may feel unequipped to intervene, particularly for challenging behavior (Baker, 2005). Second, the number of classes, compartmentalization of departments, and administrative structures inherent to high schools may require adjustments to interventions and programs (Flannery, Sugai, & Anderson, 2009). Third, support provided to high

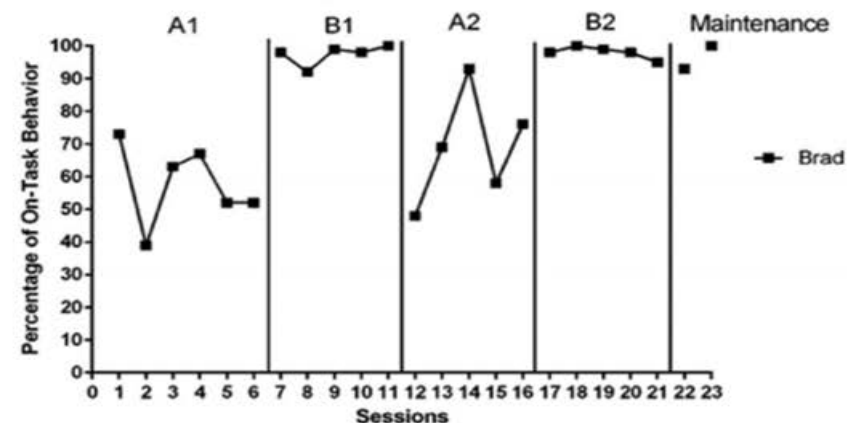
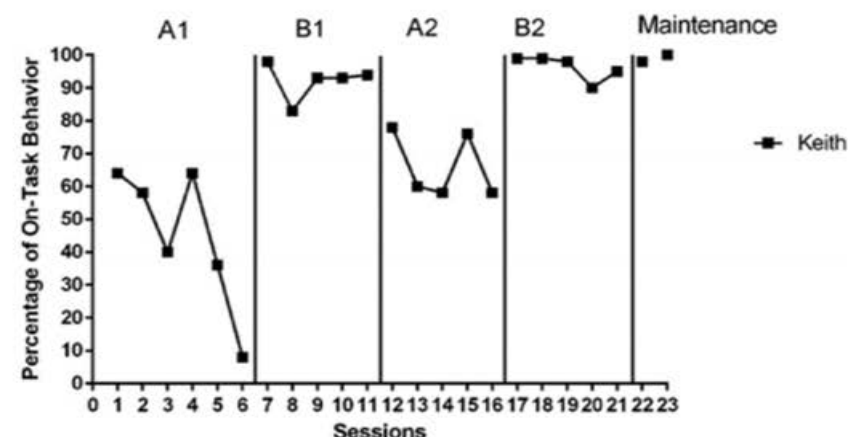
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Journal of Positive Behavior Interventions
2016, Vol. 18(3) 145–155
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DOI: 10.1177/1098300715596134
jpbj.sagepub.com



Journal of Positive Behavior Interventions



Authors	Students	Setting	Disability	Target Behavior
Wills & Mason ²⁰¹³	1 HS	Chemistry	SLD	Engagement
Wills et al ²⁰¹³	1 HS	Algebra	EBD	Engagement
Wills & Mason ²⁰¹⁴	2 HS	Biology	SLD, ADHD	Engagement, Disruptives
Bunch-Crump ²⁰¹⁵	1 ES	GE	At-risk	Engagement, Disruptives
Crutchfield et al ²⁰¹⁵	2 MS	SC	ASD	Stereotypy
Rosenbloom et al ²⁰¹⁶	1 ES	Math	ASD	Engagement
Beckman et al ²⁰¹⁶	2 ES	SC	ASD	Engagement, Productivity
Clemons et al ²⁰¹⁵	3 HS	Multiple	SLD, ASD, ID	Engagement
Rosenbloom ²⁰¹⁷	3MS, 1HS	Multiple	ASD	Engagement, Productivity

Table 1. *Studies Demonstrating the Effects of **I-Connect***

Note: ASD = Autism Spectrum Disorder; EBD= Emotional/Behavioral Disorder;

LOW OR NO TECH OPTIONS

Dr. Gail Fitzgerald
University of Missouri

Kids Tools and Strategy Tools



Kid Coach

The KidTools Support System



[Text-only version]

Main Menu

About

See Tools

Scenario Practice

Downloads

Technical Support

FAQs

Training Materials

Web Site Links

Publications

Meet the Developers

Order Copies

Software Downloads

KidTools



Overview
KidTools are planning and monitoring tools to help children gain control over personal behaviors. The KidTools Resources program provides information about the tools for adults.

Downloads (Windows)
» eKidTools (**12.1 mb**)
» iKidTools (**7.7 mb**)

Downloads (Mac OS 10.5 and earlier)*
» eKidTools (**14.9 mb**)
» iKidTools (**10.6 mb**)

* With the release of Mac OS 10.6: "Snow Leopard", Apple has removed support for all PowerPC Architecture applications; this includes KidTools and KidSkills. If you are running the MAC 10.6 operating system, you can restore this support by installing **Rosetta from Apple** and then KidTools and KidSkills will operate. If you are running Mac OS 10.7 "Lion" or higher operating systems, no fixes are available.

Downloads (Linux, Windows and Mac)
» KidTools Resources software AIR* installer file(**13 mb**)

Documentation

» KidTools User Guide (**1.3 mb**)
» KTSS Wristband ReadMe (**382 kb**)
» eKidTools-at-a-Glance (**345 kb**)



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Overview
These materials provide a variety of resources to help you effectively teach and manage children and youth with behavioral problems. Click on the **Resources** button for the address where you can go to view more information on these materials.

Information to help you prepare intervention materials and lesson plans using the planning tools is accessed by clicking on the **Intervention Strategies button. Each strategy or curriculum includes background information, suggestions for developing and implementing the approach, and examples of materials created with the planning tools.**

You can download all the programs and information resource programs here. You can link to the StrategyTools web site to download tools for secondary students.



Future Directions, Next Steps

Contact Us to set up

Will Need (Wifi and Android.. until Late August)

- Human Interaction
 - Do not neglect, nor replace the human element of self-monitoring
 - Use of Data in Connecting with Others

Time for Questions

Howard Wills

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- hpwills@ku.edu