3rd Annual Rock’n 4 Autism Awareness Concert: A Rock’n Success! By David Celiberti, Ph.D., BCBA-D

The 3rd Annual Rock’n 4 Autism Awareness Concert, co-hosted by ASAT and HOPES CAP, Inc., was held on a sunny Saturday afternoon on a beautiful, tree-lined street in Hoboken, New Jersey! It was a spectacular indoor/outdoor event that was well attended by both returning participants and many new faces. Fans of all ages enjoyed two lively sets from the Fuzzy Lemons, a popular and beloved family-friendly rock band. Attendees also participated in face painting, yoga, Hip Hop, playing in a bouncy house, and arts & crafts activities. We have received letters and notes from parents of children with autism, as well as others, who shared their children’s positive experiences at the event.

Some concert highlights included:

- Concert host and Radio Personality, Cindy Vero from W-KTU (FM 103.5 in New York City) brought tremendous energy and charisma to the stage, and mingled with the crowd throughout the afternoon;
- Hoboken Mayor Dawn Zimmer welcomed the audience and was instrumental in helping us plan the venue;
- ASAT Board members Ruth Donlin, Dena Russell, and Bridget Taylor, as well as ASAT Extern, Lauren Schnell, were on hand to ensure a successful event;
- We were grateful for the support of 75+ volunteers who represented over 280 collective hours of volunteering. Volunteers included staff and parents from HOPES CAP Inc. and several local businesses as well (see page 3);
- Contributions from over 120 local and regional businesses helped make the event a success. See page 3 for a list the businesses who contributed money, services, or merchandise worth over $200. Successful silent auction bidders took home some amazing items, including one-of-a-kind memorabilia! Notable winning items included: two New York Rangers signed hockey sticks; artwork; gym memberships; and hotel stays in New York City, San Juan, and Atlantic City, just to name a few;
- We received generous grants from Party with Purpose, Inc. and the Provident Bank Foundation; (For those in the NYC area, please see page 16 to learn about a great event sponsored by Party with Purpose, Inc.).
- Marisa Musachio from HOPES CAP Inc. and myself joined Cindy Vero on her KTU Cares program. This 30 minute interview was broadcasted on April 21st. Listen here.

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Following the Fuzzy Lemons' second set, the audience was treated to a special dance performance by "The Exceptional Dance Team" featuring 5 children with special needs (ages 6-11) and their helpers (ages 13-16). This inspiring group was founded by Joy Cutrone and choreographed by Jennifer Smith. The helpers were all volunteers with the Inner Beat Dance Company. As a finale, we were privileged to see a solo performance by Jernee, a 17 year-old former team member with Down Syndrome, who is now an assistant! Thank you Joy for your commitment to reminding us all that we can all have the same ability when the music is playing and when the proper supports are provided!

Aside from organizing a spectacular, family-friendly event here in Hoboken, for families of children with autism and the broader community, our goal is to leave an indelible imprint in the local area. We strive to promote awareness of autism, its treatment, and access to high-quality information to guide treatment decisions.

Some of the local initiatives that will be funded by this year’s benefit concert include:

- Comprehensive compilations of resources for families of children with autism and service providers. Dozens of these packets were distributed at the event;
- Expansion of existing autism lending libraries in various Hoboken locations and donation of books to the Hoboken Board of Education;
- Full scholarships for Hoboken parents to attend conferences related to science-based treatment of autism;
- Support for the Hoboken Special Needs Parent Group, which is committed to supporting the broader community of parents of children with special needs; and
- Support for local recreational programs geared toward including children with special needs and their typically developing peers.

Some of the many regional and national initiatives include:

- Creation and distribution of a resource booklet for pediatricians and primary care physicians, Beyond an ASD Diagnosis: Supporting Families Over the Lifespan;
- Identification of new family members and service providers who will receive subscriptions to Science in Autism Treatment; and
- Translation of printed material about autism treatment into Spanish.

Our event was such a tremendous success... so we’ve decided to do it all over again in 2014! We are already beginning to plan for next year’s event!
We were fortunate to have over 75 volunteers at the event. Specifically, we would like to thank individuals from the following businesses and organizations: Capital One Bank, Enterprise Rental Car, Hoboken Grace Church, Hoboken Volunteers, Party with Purpose, State Farm Insurance, and Target.

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In addition to our Advisory Board a number of Coordinators, Externs, and other Volunteers lend their time and talents to support ASAT’s mission and initiatives. As you can see, we have individuals who support each aspect of our organization. If you want to assist, please email us at info@asatonline.org

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Letter from the Co-editor: Josh Pritchard, Ph.D, BCBA-D

Dear Reader,

ASAT is really cooking this year! With less than half of the year past, we are well on our way to meeting several of the goals that David set for us at its beginning. In addition to an update on our fundraising activities, this issue is packed with articles ranging from tips on how to setup a play date to fitness training for adults with autism. But first, the goals:

We are steadily on the way to meeting the 10,000 subscriber mark, but need your help. We hear about many people forwarding our newsletter on, and we love that! Be sure to also ask your friend to sign up for their own free subscription at www.asatonline.org/signup.

You’ll notice this issue that one of our social media goals have almost been realized as our Facebook fan count just topped 6000! Its easy to share our Facebook updates which can help us get more fans and reach this goal. This last month we had a series of posts which consistently reached over 11,000 people through shares and likes. If you haven’t yet, you should become our fan so that you can stay updated on all the exciting new things we are doing.

As featured in this issue, the Rock’n 4 Autism Awareness Concert was a wonderful time and a great way to help ASAT and HOPES CAP, Inc. pursue our missions. Check out page 2 to see what things ASAT will be able to do because of your generous support.

This is our first issue which contains an interview with video support! Starting on page 6, check out the interview with Linda and Jeff for small movie icons throughout the pages. Click on each to see a video illustrating with an example of what they’re talking about.

Make certain you check out the rousing note from Bobby Newman, ASAT’s New York City Marathon team leader on page 25. If you missed Rock’n 4 Autism Awareness, now is your chance to help fund our mission, sponsor an ASAT team member for the NYC Marathon!

Finally, I want to end with an announcement. This will be the 15th issue that David and I have been co-editing this newsletter! I still remember the day David asked me to help him revive the ASAT newsletter in the summer of 2009. I was excited (yet apprehensive) to be doing yet another newsletter. I have edited newsletters for a variety of organizations and knew that getting and placing content would be no easy feat. Yet, somehow for SIAT, we never had a problem filling the pages (I’m pretty sure the somehow is the amazing work that David pours into this organization). This issue is a perfect example. It was supposed to be a short one, yet we are topping 30 pages! I was faced with a new difficulty with ASAT. We have such great contributions, we really struggle not to try and cram them all in.

I am proud of all the issues that we delivered, each packed with information that I believe is helpful to anyone interested in autism. I hope they are used continually in the advocacy for science in its treatment. I remember fondly the many hours working with David on a variety of problems, from the occasional font malfunction to David’s horror story about a typo in the title of an article about public schools.

Unfortunately, this will be my last issue as co-editor. Happily, Dr. Daniela Fazzio who has been working tirelessly behind the scenes to correct most of my mistakes will now take the helm and I cannot wait to see how she and David continue to improve SIAT. I will miss working on SIAT dearly, but will rest easily knowing I leave you in extremely capable hands.

Yours in Science,

Joshua K. Pritchard, PhD, BCBA-D
Co-editor of Science in Autism Treatment

ASAT
Providing Accurate, Science-Based Information - Promoting Access to Effective Treatment
I recently had the opportunity to interview two very talented behavior analysts, Linda Meyer and Jeff Jacobs, who answered a wide array of questions about fitness programming for individuals with autism. Their unique experiences as behavior analysts and fitness consultants (Linda is a certified personal fitness trainer and marathon runner; Jeff is a black belt in martial arts and a runner) have clearly shaped their perspectives on how to promote fitness behaviors in individuals with autism.

Jeff, much of the existing, published research has focused on the use of exercise to address challenging behaviors in persons with autism. Can you provide a synopsis of this literature, along with its recurring themes, and perhaps share your thoughts on future directions within this area?

Yes, numerous studies have demonstrated decreased stereotypy in children and adults with autism following physical activity. Stereotypic behavior decreased significantly following jogging in three men and three women with autism of ages ranging from 22.8 to 41.3 years (Elliot, Dobbin, Rose, & Soper, 1994). Aerobic exercise was found to reduce the stereotypical behavior patterns and self-stimulatory behavior of children with ASDs (Elliot, Dobbin, Rose, & Soper, 1994). Ten minutes of roller skating prior to a structured play session decreased self-stimulation in an eight-year-old boy with developmental disabilities (Powers, Thibadeau, & Rose, 1992). Rosenthal-Malek and Mitchell (1997) observed that self-stimulatory behaviors decreased, correct responding increased, and the number of tasks completed increased following physical fitness activities (versus academic activities) in adolescents with autism. Celiberti, Bobo, Kelly, Harris, and Handleman (1997) observed that suppression of stereotypy following jogging remained below baseline levels for up to 40 minutes. After an 8–10-minute jogging session outside a school building, Watters and Watters (1980) observed lower levels of self-stimulation for five males with autism, aged 9 to 11 years. Yilmaz, Yanardag, Birkan, and Bumin (2004) observed reduction in topographies of stereotypy in a nine-year-old immediately following swim sessions.

The speed, frequency, and intensity of the aerobic activity appear to be significant intervening variables (Dunn, 1984; Kern, Koegel, & Dunlap, 1984; Levinson & Reid, 1993). Walking had limited, if any, impact on reducing stereotypy. Increased speed decreased stereotypy (Allison, Basile, & MacDonald, 1991; Levinson & Reid, 1993; Elliot et al., 1994). Prupas and Reid (2001) demonstrated a slight reduction in stereotypy across four children, ages five to nine years, when ten-minute jogging sessions were increased from one to three sessions per day.

In summary, there is research demonstrating the effectiveness of exercise to reduce stereotypy. Further research is required to determine how the interrelated characteristics of amount, intensity, frequency, and type of physical activity are related to the topography, duration, and magnitude of decrements in stereotypy. There are no clear guidelines from research to guide the development of an exercise routine to effectively and consistently reduce stereotypy for an extended period of time. A 2010 review by Lang, Ashbaugh, Regester, Ence, and Smith suggests that physical stimulation during ex-

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Interview with Linda Meyer and Jeff Jacobs continued...

ercise might replace or reduce motivation for the individual to engage in motor stereotypy. Exercise may also act like a prolonged overcorrection procedure or a differential reinforcement of incompatible behavior (DRI) or differential reinforcement of other behavior (DRO) that research has shown to be effective for decreasing stereotypy (Ahearn, Clark, MacDonald, & Chung, 2011).

Linda, clearly there are other advantages beyond the mere suppression of stereotypy. Can you provide our readers with some of the positive outcomes associated with targeting fitness in children and adults with autism?

Targeting fitness is a great idea for many reasons. We know that regular exercise can promote health and fitness as well as improve appearance. Achieving an appropriate fitness level can help individuals with autism spectrum disorders participate more fully with their families in leisure time activities and everyday household chores, as well as within educational, vocational and community environments. More specifically, participation in fitness programs can: 1) improve social and communication skills (Pan, 2010); 2) improve heart and lung functioning; 3) improve balance and flexibility (Yilmaz, Yanardag, Birkan, & Bumin, 2004); 4) strengthen muscle; and 5) increase lean body mass.

Lochbaum and Crews (2003) taught five individuals with autism, ages 16 to 21; three participants learned to ride a stationary bike and two were taught to lift weights on a Nautilus ® exercise machine. All participants improved in aerobic and strength fitness. Using a treadmill, Pitetti, Rendoff, Grover, and Beets (2007) reduced the body mass index (BMI) of ten adolescents with severe autism and increased their exercise capacity (i.e., participants walked faster and longer with increased incline). BMI is a number calculated from a person’s weight and height. It provides a reliable indicator of body fat for most people and is used to screen for weight categories that may lead to health problems.

Engaging in specific exercises and related sports activities repeatedly promotes skill development in those specific exercises or sports activities. For example, Fragala-Pinkham, Haley, and O’Neil (2008) observed a significant reduction in the amount of time for six male adolescents on the autism spectrum to complete a half-mile run/walk.

In July of 2011, the Centers for Disease Control and Prevention / American College of Sports Medicine (ACSM) released a policy statement summarizing recommended exercise components and the health benefits supported by scientific studies. The overall message is for individuals to get involved in a comprehensive program of exercise, reduce time spent in sedentary activities and spend more time moving.

So Jeff, what would you recommend as the first step, when selecting a fitness program for an individual with autism?

A comprehensive exercise program includes flexibility, cardiorespiratory, and strength training exercises; however, it is important to select a program based on your desired outcome. Decide if you want to increase flexibility, heart endurance, respiration, muscle strength or any combination. Begin with the outcome in mind. What are the benefits you are hoping to achieve through participation in an exercise program? We have developed a checklist (Meyer & Jacobs, 2007) to help you select the right program.

Linda, can you tell our readers more about how this checklist can be used to determine if an exercise program is a good fit for an individual with autism? Can you also mention where the checklist is available, and if it is easily accessible?

Go to http://www.autismspeaks.org/docs/family_services_docs/fitnesschecklist.pdf for a free download of the Checklist to Assist Individuals with ASDs or Caregivers in the Selection of Fitness, Leisure, and Recreation Programs.

It is generally recognized that a limited number of fitness and recreation programs are available to participants with autism spectrum disorders. Consider: the cost; proximity to home/school/work; staff qualifications; cleanliness; and the program’s philosophy and ability to meet personal goals, and always keep the individual safe. Our checklist...
Interview with Linda Meyer and Jeff Jacobs continued...

...can assist participants and/or the families and professionals who support them in evaluating a potential recreation or fitness program. The checklist can remind you to collect details regarding: the age appropriateness of the activities; how skills are taught, generalized, and maintained; the ability to use motivational systems; and how programs are evaluated and progress is measured. We strongly urge you to observe the program in person, and use this checklist to guide your conversations with everyone.

Observing the program and using our checklist can help you determine if your goals can be met in a particular program that is designed and monitored by the trainer. For example, is the exercise session long enough and at correct intensity, duration and frequency level to actually promote heart and lung conditioning? If socialization is one of your participant’s goals, repeated opportunities to practice and/or learn new social skills (e.g., initiating, commenting, responding to comments from others) must be built into the program.

Are there any other suggestions or steps to consider before enrolling or participating in a fitness program?

We have a few more suggestions:

- Obtain a complete health assessment and medical history. It is important to receive medical clearance before beginning any exercise program.
- Many facilities have special membership deals if the participant is able to work out during off-peak hours (usually mid-to-late afternoon).
- Do not compromise with respect to clothing. Buying workout attire suitable for the specific workout promotes a socially acceptable, safe and healthy workout.
- If a participant with autism does enroll in a fitness program, it is critical to address all safety concerns and develop routines that will maximize the fitness benefits.
- During workouts, always arrange the environment and provide schedules to promote active engagement and independence. Schedules can be in various forms, including: written, photographic, spoken instructions, and/or a combination on an iPad or a notebook.

As Jeff mentioned, you need to assure safety and maximum fitness benefit during a fitness workout or community recreation event. Monitoring levels and types of stereotypy is important, but vocal and motor stereotypy may not necessarily be stigmatizing. If you observe all of the competitors at the start of a running race or individuals engaging in strength training routines at a gym, you will more than likely see many of them rocking and/or pacing back and forth to music from their iPods (especially during the brief rests between weight training sets in gyms) and high rates of unusual, repetitive body movements before a race. Recently I noted a new rule posted in the weight room of the gym where I work out. It stated: “No loud grunting.” To the best of my knowledge, no one with autism had been working out in that gym.

Our readers will appreciate that very comprehensive set of considerations. Linda, let’s get into the details about support systems. What information about autism would be important to share? What is needed to make a fitness program successful?

Individuals with autism may be unresponsive to instructions from their fitness trainers or requests to perform exercise routines and tasks, have limited communicative ability, and be unaware of safety issues and potentially dangerous situations. Make sure everyone is on board and understands the individual’s fitness goals. Those involved should support the individual’s needs, strengths, and competencies (e.g., can follow a written schedule), as well as his/her unique characteristics of autism.

To increase the potential for success, spend time talking with the program’s director/owner, as well as the supervisors/trainers who will be conducting the fitness sessions. You may need a team: some-
Interview with Linda Meyer and Jeff Jacobs continued...

one who understands autism, someone who knows the principles of exercise science, and someone experienced in teaching skills. You may consult with a Board Certified Behavior Analyst (BCBA®) for guidance on teaching skills, and fitness trainers to provide advice on exercise routines, fitness goals, and safety. Consider selecting a teacher and/or support person who works out her/himself.

If you cannot afford or find a team, consider recruiting volunteers who are willing to be trained. Many graduate exercise science programs require volunteer and internship hours. High schools commonly require students to perform community service hours. Consistency and communication amongst members of the team will be essential to ensure success.

Jeff, what behavior analytic teaching procedures bear relevance to the teaching of fitness skills?

The teaching procedures most frequently reported in the literature to teach exercise behavior include providing verbal and tangible reinforcement, use of systematic prompting hierarchies with prompt fading, modeling (video and in-vivo) with verbal instructions, and physical guidance using a least-to-most prompting procedure.

It might be helpful if we described the use of a least-to-most prompting procedure to teach a strength training skill: the bicep curl (biceps are muscles located in the upper arm to help you hold heavy objects) to a 17-year-old female with autism. Katie would benefit from resistance training, as resistance or strength training promotes an increase in bone strength, which reduces the risk of musculoskeletal injuries or perhaps the severity of those injuries (Kohrt, Bloomfield, Little, Nelson, & Yingling, 2004). We will use a least-to-most prompting procedure combined with an errorless teaching procedure (Yanardag, Birkan, Yilmaz, Konukman, Agbuga, & Liberman, 2011).

Target Skill: Biceps Curl: Katie stands with feet hip width a part, knees slightly bent, arms at her sides, palms up and holds a barbell at waist height. Keeping elbows close to her body, Kathy curls both arms up until they are in front of her shoulders. Then she lowers the barbell down to the original position.

Suggested Teaching Steps:

1. Probe: holds lightest free weight barbell available (<10 lbs. or 1.5” diameter wooden dowel). Trainer holds a similar barbell, faces the client and says, “Do this,” and then begins a correct biceps curl. If the client imitates a good approximation of the trainer’s barbell movement, provide verbal praise. The client is ready to begin using the barbell. Increase the weight of the barbell until baseline is established and start training.

2. If no imitation, present a tangible reinforcer and say, “Do what I am doing and you will get ______.” If acceptable imitation, present reinforcer accompanied by verbal praise and follow training objectives incorporating a motivation system.

3. If no imitation, demonstrate the curl again and provide physical guidance. Stand behind the client and position your hands on the barbell with each of your hands located slightly outside of the client’s hands. Reinforce with tangible and verbal praise.

Fade the position of the physical prompt (e.g., from barbell to client’s forearms), shadow client’s hands, use moving gestural prompt, no prompts until the client performs the barbell curl independently.
Interview with Linda Meyer and Jeff Jacobs continued...

Suggested Alternative: If your client is unable to perform a standing barbell biceps curl, consider moving to a piece of equipment in the gym called the biceps curl machine.

Linda, what role can parents play in supporting the program and promoting carryover? Can you share any specific examples of how this may play itself out?

Recent research suggests that parents play an important role getting and keeping their children involved in fitness programs (Nelson, Gordon-Larsen, Adair, & Popkin, 2005). As individuals with autism may be unable to independently demonstrate an interest in, or determine a need for a type of a fitness program, parents frequently play these critical roles. Traditionally, when any family member participates in a sport or fitness program, it impacts the entire family. Parents need to be able, willing, and agree to dedicate family resources (e.g., time, money, transportation) to begin and continue a meaningful fitness program for their family member with autism. We’ve observed that when an individual with autism gets involved in regular fitness activities, more often than not, moms and dads, as well as teachers and support persons also begin to participate.

To assess the impact a running club had on families at the Eden II School in Staten Island, Randy Horowitz distributed a survey to determine how often parents participated in exercise routines with their children. Prior to the running club, 20% of parents reported that they had participated with their child in any exercise program. Seven months after the running club began, the same families were surveyed again, and 23 out of the 35 (66%) respondents indicated that they had participated in exercise routines with their children.

Parents are now running with their children in the park or at the track of the local YMCA, which is also where the participants run weekly with the school-based running club. One mom and dad reported that they had never run in any scored races before their sons started running. And now, the dad has completed over 40 races (the majority with one of his sons) and the mom has completed at least a dozen races, often running as fast as she can to keep up with her speedy sons!

Running has become the focal point of many Eden II families. In addition to the running club in school, many families have connected with volunteer coaches and spend evenings running and weekends competing in neighborhood races. Running has not only resulted in increased fitness, but has opened the doors for inclusion in community activities for both participants and their families.

Linda, how can someone manage the program? How do you know if a fitness routine is working?

Fitness programs are managed through data collection and analysis of data summaries over time. It is important to continue to do what is working and stop doing what is not working. A personal fitness trainer should periodically conduct and summarize formal fitness assessments to determine if the participant is meeting fitness goals.

Systematic problem solving is required when fitness goals are not being met. A personal fitness
Interview with Linda Meyer and Jeff Jacobs continued...

A personal fitness trainer will review the components of the exercise routine to determine if the individual engages in an exercise activity often enough (frequency), long enough (duration), and at a level and amount (progression-overload) required to improve fitness levels.

Revisions may be necessary after reviewing the initial screening results. A personal fitness trainer can revisit the data to determine if the original goals of the programs were appropriate, specific and attainable.

A medical consultation might be required to discern if the participant has developed any additional health concerns which could negatively impact the potential benefits of the workout. A consultation may include measuring the individual’s improved medical status (e.g., decreased blood pressure, lower resting heart rate).

Just the thought of collecting data can be overwhelming and intimidating for many. Can you explain why data is collected, and suggest some easy-to-use tracking systems?

Don’t be intimidated by the thought of taking data. Data are taken for a variety of reasons and can be collected in a variety of ways. For many purposes, exercise journals (e.g., Monday, September 24th, ran for 1.5 miles in 12 minutes) and workout checklists (noting activity, duration, and intensity) are tools that may be used to assess progress and assist in problem-solving over time. Body measurements, weight, and calculating BMI can help determine if the activity you selected to meet your goals of losing fat and increasing lean body mass is working.

An overarching goal for many of our participants is to increase independence in their workouts. Certainly decreasing support levels should be everyone’s goal. A standard checklist noting levels and types of prompts is useful. It is also helpful for the support person to consistently fade prompts. Track the percentage of steps completed independently using a schedule on an iPad. Robert can self-record the number of sit-ups he has completed, how long he ran on the treadmill, and which weights he used on the circuit during a session at the gym. A teacher can record that Martin pinned his bib number to his shirt before the race this morning.

For teaching independence or use of a locker room, a standard task analysis can be conducted. Data can be collected and summarized as the percentage of steps completed independently.

Social validity is another important consideration. Does the participant with autism look like everyone else in the gym or in the community? It is important to keep in mind that typical people may exhibit strange, but acceptable behaviors in the gym and in the community. Are you meeting the goals that the participant and/or those who support the participant have previously agreed are important? A simple social validity assessment could look like this:

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<tbody>
<tr>
<td>Is an appropriate weight</td>
</tr>
<tr>
<td>Demonstrates adequate flexibility</td>
</tr>
<tr>
<td>Has adequate strength</td>
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<tr>
<td>Demonstrates adequate endurance</td>
</tr>
<tr>
<td>Is physically fit</td>
</tr>
<tr>
<td>Eats a balanced healthy diet</td>
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</tbody>
</table>
Interview with Linda Meyer and Jeff Jacobs continued...

Jeff, fitness encompasses many factors that are indeed quite measurable. Can you provide some details about data collection both with respect to independent and dependent variables?

It is common to see personal fitness trainers and participants using timers, counters, clipboards, smart phones or iPads to track their workouts in the gym and on the track. They record: the type of strength training exercise; the weight lifted; the number of repetitions and sets in the gym; the number of laps or total distance on the road and in the pool. It is also important to record machine settings (e.g., treadmill speed and incline, seat positions on exercise equipment) to enable safe and consistent exercising.

Record all workout sessions as they occur (e.g., date, type). Data should be collected at least 1x per week on each individual skill. If the individual does three sets during a strength training session, you may choose to collect data on only the first set. If the individual uses a variety (e.g., intervals, distance), of aerobic workouts in their schedule, record each in a journal.

Fitness change is gradual, but prompting levels might vary. Record the last prompt level/location used so you know where to start on the first repetition of the next session.

Jeff, at the start of the interview, we talked a bit about future research addressing the suppression of stereotypy and other behaviors. Can you share with our readers your broader ideas about future research related to fitness in general?

There are a number of areas warranting further research:

With respect to strength training: scientifically validated protocols to teach proper use of exercise equipment and then to increase independent use of the equipment would be very beneficial.

The gym or many exercise settings (studios, trails, tracks, and pools) are novel (not part of the person’s learning history) and can be a place to teach skills that were never mastered elsewhere. It will be important to demonstrate both from a research standpoint, as well as clinically, that the skills mastered in the gym or track, generalize to school, home, and community settings.

Is it possible to increase the number of social interactions in community-based exercise settings through peer modeling or observational learning?

Linda, what do you see as additional areas for future research?

I was invited to participate in a research team’s efforts to replicate and expand upon previous studies regarding the benefits of fitness activities and the impact on stereotypy, aggression and increased attention during academic tasks. Therefore, it would be helpful for future research to assess the extent to which gains extend beyond the acquisition of fitness behavior but also lead to improvement in other desired behaviors.

Thank you both for a wonderfully thorough interview. Your experiences in the field, or shall I say in the gyms and on the field are clearly conveyed and for that I am very grateful. You have shared an incredible amount of information that would be helpful to all. The extensive listing or resources will be of great use to new researchers eager to tackle some many of the unanswered questions related to fitness training for individuals with autism.
Interview with Linda Meyer and Jeff Jacobs continued...

Additional Exercises with video:

References


Interview with Linda Meyers and Jeff Jacobs continued...

the academic engagement of on children with autism spectrum disorder. Psychology in the Schools, 48, 198-213.


Linda Meyer, Ed.D., MPA, BCBA-D, CPT is a consultant in private practice (Linda S. Meyer Consulting LLC). She is the cofounder of the Alpine Learning Group in Paramus, NJ and served as its founding executive director from 1989 until 2005. She serves on the professional advisory boards of several schools and agencies serving individuals with autism spectrum disorders. Linda has presented at regional, national, and international conferences, and authored articles and book chapters on various special education, nonprofit management, and personal fitness topics. She provides consultation in community-based fitness instruction for adolescents and adults with autism spectrum disorders. She has taught doctoral and Masters level students (in educational and clinical psychology programs), and is currently an adjunct professor at Caldwell College, in Caldwell, NJ. Linda is a member of the NJ Governor’s Council for Research and Medical Treatment of Autism.

Jeff Jacobs, MA, BCBA is a behavior analyst who works in the Hackensack School District in New Jersey. He has been teaching Tae Kwon Do to individuals diagnosed with ASDs for more than 15 years. Jeff provides private consulting and community-based fitness instruction. He has presented at regional and national conferences on fitness, using iPad/iTouch to increase independence, and the use of correct technique during rigorous exercise routines.
Focus on Science: Determining the Effectiveness of Treatments available to Persons with Autism Part Two: by Tristram Smith, Ph. D. and Daniel W. Mruzek, Ph. D.

How does one determine if a particular autism treatment is effective? In Part One of this series, we reported that ASAT uses a two-step process to report on effectiveness in our research synopses, as well as inform our treatment summaries: (1) the identification and analysis of each study on a particular intervention, and (2) integrating this information into an overall appraisal and recommendation (see p. 4 of the Winter 2013 issue of Science in Autism Treatment and http://www.asatonline.org/treatment/treatments_desc). Our process is based on a set of nine criteria developed by Chambless and Hollon (1998) and adopted by the Clinical Psychology Division of the American Psychological Association for the evaluation of research on psychological intervention (see Table 1 on p. 14). In Part One, of this series, we reviewed the first five criteria, using our analysis of the LEAP model of intervention as an example (2011; see the Fall 2012 issue of Science in Autism Treatment, p. 17 for an ASAT Research Review of this study).

Here, we look at criteria 6 – 9 and integrate this discussion with helping families and practitioners who are making treatment decisions.

Criterion 6 – Resolution of Conflicting Results: Science rarely progresses in a “straight line”. Rather, data from “new” studies may or may not replicate the findings of previous studies. The results of one study may suggest that a particular treatment is helpful for some individuals with ASD, while the results of another study may suggest that the same treatment is of limited benefit, of benefit for only some individuals, or even altogether unhelpful. As a result, our evaluation of the scientific validation of a particular autism treatment must include consideration of these disparate findings. In our example of the LEAP model of intervention, we find that there is only one controlled outcome study (Strain & Bovey, 2011), so, although the study yielded encouraging results, we indicated that replications are needed. Positive outcomes found in one study, even a well-controlled study such as the one on LEAP, do not prove that a treatment is effective.

Criterion 7 – Limitation of Efficacy: Assuming that the findings from studies provide some evidence that a particular treatment is effective, our evaluation of these findings should consider for whom these findings are relevant (e.g., individuals with ASD in a particular age group, at a certain level of cognitive functioning, or with a specific presenting concern), as well as variables that may influence the effectiveness of treatment (e.g., hours of intervention per week, how well staff are trained). For example, in the study investigating the LEAP model of early intervention (2011), Strain and Bovey studied the impact of the LEAP model with preschool children and did not attempt to extend their findings to other age groups. Also, they carefully considered questions related to the number of hours per week that their intervention was delivered and the hours of training required by participating staff.

(Continued on page 16)
Focus on Science continued...

Criterion 8 – Generalizability: This criterion refers to the degree to which we can expect that the carefully controlled conditions described in a particular study can be maintained in “real life” settings (e.g., amount of expert supervision of practitioners, material resources, physical environment). Even a very powerful treatment effect in a study means little to families and practitioners if the necessary conditions for the treatment cannot be realized in typical intervention settings (e.g., schools, homes). In their discussion of the LEAP model, Strain and Bovey focused squarely upon the degree to which the LEAP model might be implemented in community settings and outside of the relatively tight controls of research. Indeed, this study was implemented in community-based inclusive preschool classrooms in order to assess ease of implementation and satisfaction of participating intervention staff. As mentioned above, additional studies will be necessary to support or refute their positive findings.

Criterion 9 – Treatment Feasibility: In order for a particular treatment to be effective for persons with autism, the treatment must not be overly burdensome for families and practitioners (e.g., too time-consuming, costly, or requiring an unrealistically sophisticated skill set). In their 2011 study, Strain and Bovey included a social validity scale completed by participating lead teachers that examined their impressions of the LEAP model of early intervention along several dimensions related to feasibility, including social acceptability, practicality and flexibility of the intervention. How can ASAT’s synopses of articles and treatment summaries help parents and practitioners with their decision-making? We suggest that they be viewed as “quick reference guides” for checking particular treatment options presented by a practitioner or marketer, as well as “conversation starters” with trusted practitioners (e.g., physician, psychologist, behavior analyst collaborating with family). By the way, if you notice that a key reference is missing, or you suspect that we mischaracterized a treatment or study finding, feel free to contact us at info@asatonline.org. We contend that families making treatment decisions should have the benefit of clear, concise and accurate information. To this end, ASAT’s Treatment Summaries are an important resource.

(Continued on page 17)
**Focus on Science continued...**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Common Considerations</th>
</tr>
</thead>
</table>
| **1. Overall Research Design** | Benefits of intervention not due to chance  
Design controls for potentially confounding variables  
Design described with enough detail to replicate  
Example: Randomized clinical trials |
| **2. Sample Description** | Specific population sampled is specified  
Standard procedures used to confirm diagnosis |
| **3. Outcome Assessment** | Tools measure key clinical concerns  
Measures have demonstrated reliability and validity  
Interviewers blinded to group status of participants  
Clinical significance is assessed, not just statistical significance |
| **4. Treatment Implementation** | Intervention is manualized for others to further test  
Study “therapists” are trained and monitored |
| **5. Data Analysis** | Procedures for data analysis are planned prior to data collection; “fishing” for significant results through multiple tests does not occur  
Consideration is given to different group drop-out rates in the analysis of the results |
| **6. Resolution of Conflicting Results** | Studies with positive results are weighed alongside studies with results suggesting “no benefit”.  
Meta-analyses (studies that analyze a number of independent studies at one time) are used when warranted. |
| **7. Limitation of Efficacy** | When reporting positive results, researchers identify for whom the treatment is beneficial.  
Possible “moderator variables” (factors that may systematically influence effectiveness) are considered and acknowledged. |
| **8. Generalizability** | Consideration is given to the relevancy of the results of a treatment in actual clinical applications.  
Variables that may affect the “external validity” of results (e.g., therapist training, level of supervision) are acknowledged. |
| **9. Treatment Feasibility** | The degree to which a treatment is acceptable to individuals and their families (i.e., preferred over other options) is acknowledged.  
The ease at which a treatment can be used by practitioners with integrity is considered. |

*Adapted from Chambless and Hollon (1998)*

**References**


Clinical Corner: Guided Play Dates

My child with autism is doing well in his academic programming, but I’d like to help him develop social skills with peers. He participates in play dates, but I often worry that we are not making the most of these opportunities. How can I help him learn to play with a friend?

Answered by Caitlin Reilly, MA and Carole Deitchman, MA, BCBA (Clinical Director at REED Academy)

The importance of play dates

Fostering the development of play and social skills should be an essential component of any educational or home program for children with autism. Possessing these skills not only improves a child’s overall quality of life and ability to sustain relationships, but also enhances his or her ability to learn from others. Many children with autism often need direct and systematic instruction to learn these skills.

Parent-guided play dates can provide the structure and practice needed to help a child improve peer social skills and make friends (Koegel, Werner, Vismara, & Koegel, 2005). In order for play dates to be an effective and rewarding social activity for your child, there are a few prerequisite skills that he should have. These include:

- knowing how to tolerate, attend to, and imitate other children;
- being able to communicate his wants and needs;
- taking turns; and
- playing with a few age-appropriate toys and one or two simple games (Smith, 2001).

If your child is not yet ready for play dates, make a list of the skills that he will need to play with a friend, and teach these prerequisite skills with adults first (Leaf & McEachin, 1999). Many of the above listed skills are likely ones that he is also working on in school so you can add additional opportunities to practice with him (and perhaps siblings, if possible) at home.

Planning an effective play date

Once your child demonstrates the prerequisite skills for play dates, it is important to guide his play dates using evidence-based methods. These methods incorporate techniques that have been repeatedly shown to be effective through controlled, scientific research. For your child’s play dates, such methods include the use of motivational systems, the strategic use of reinforcement, and the use of systematically faded prompts. Evidence-based methods also call for the collection of objective data to monitor progress.

In order to increase motivation during the play date, use toys and activities that are especially enjoyable for your child and his friend (Koegel et al., 2005). Motivation is essential for keeping both children engaged, and for maximizing your child’s learning. Your child will be more likely to ask his friend to play a game if he enjoys that game. Similarly, the peer may be less likely to engage with your child if he does not enjoy the play date activity. Taking turns in selecting activities may help in this regard.

It is also important to identify specific skills that you want to teach your child during his play dates and then create 2-3 goals focused on these targets for each get-together. These may include such skills as greeting friends, initiating an activity and asking questions. For example, the first several play dates may focus on saying “Hi” and “Bye” to the peer and playing catch. As with other types of skills instruction, consider pre-teaching these play and social skills. Your child may require significant prompting initially, so think about how you can fade those prompts as your child’s skills improve and how to provide plenty of practice opportunities across settings, activities and individuals. Once your child greets his friend with ease and independence, focus on teaching him more complex play skills such as asking questions and making comments while interacting with the peer. Remember, the skills that you teach during play dates should be those that your child has already learned with an adult. Start with simpler skills, and build on those your child has already accomplished.

If your child has difficult behavior, make a plan for how to manage it and follow through during play dates. Your plan may include “preventative” strategies, such as limiting the duration of the play date, using visual supports (e.g. activity board) and minimizing activities that are a source of obsession or possible angst. Do not be concerned so much about embarrassing your child as giving him the support and repeated practice opportunities that he needs to be successful (e.g., repeating an interaction in which eye contact was not exhibited). Consistent consequences are essential in order to decrease disruptive behaviors and to help your child successfully relate to his peers (Maurice, Green, & Luce, 1996).

Selecting peers

Potential play date peers should include boys and girls of different ages (Smith, 2001). The best peers for play dates are often open and responsive. That is, they provide ample opportunity for your child to learn; they ask questions, they respond with enthusiasm, and they exhibit patience as your child practices socializing. From a behavior analytic

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standpoint, we might view a peer’s response as reinforcement for your child’s response. So, if his peer is unresponsive, your child may be less likely to initiate with that peer again during future opportunities. Ask your child’s teacher or other school staff for peer suggestions, or ask the parents of neighborhood children whom you know. Peers that your child naturally comes into contact with on a regular basis, such as family members, are ideal for practicing social skills (Oppenheim-Leaf et al., 2012). It is important that your child’s peer and his or her parents know about your child’s unique behaviors and needs (Baker, 2003). Prepare them for what to expect, and ask the other parent for permission to give rewards during or after the play date. For example, the peer might be rewarded for asking your child a question or waiting patiently while your child responds. Reinforcing the peer for interacting with your child will motivate him to interact with your child more in the future.

Data collection
Taking data on your child’s progress is essential in ensuring effective teaching strategies. This process will help you set goals, monitor changes objectively, and alter your teaching methods if progress has stalled or declined. For example, if your child is not learning to say, “Hi” to his or her peer, you may need to increase motivation to learn, increase your level of assistance (such as providing a verbal model of the greeting), or consult with a qualified therapist for other suggestions.

The following is an example of a basic data sheet that can be created to track your child’s progress during each play date. The skills that you teach and the data you collect will vary depending upon your child’s individual needs and abilities.

<table>
<thead>
<tr>
<th>Tommy’s Play Date Data Sheet</th>
<th>Tommy’s Play Date Data Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: 10/25/12</td>
<td>Date: 11/2/12</td>
</tr>
<tr>
<td>Peer: Kyle</td>
<td>Peer: Kyle</td>
</tr>
<tr>
<td>1. Says “Hi” to peer when prompted +</td>
<td>1. Says “Hi” to peer when prompted +</td>
</tr>
<tr>
<td>2. Initiates activity with peer using photo prompt in activity schedule. /+ /+ /+ /-</td>
<td>2. Initiates activity with peer using photo prompt in activity schedule. /+ /+ /+ /+</td>
</tr>
<tr>
<td>3. Instances of problem behavior (tally) ___</td>
<td>3. Instances of problem behavior (tally) ___</td>
</tr>
</tbody>
</table>

Conducting an effective play date
Set aside favorite snacks to use as rewards for your child during his play dates (Leaf & McEachin, 1999). It is best to save these special snacks for play dates only, as this will make your child more eager to earn them. During the play date, “shadow” your child by positioning yourself behind him in order to prompt initiations with and responses to his peer (Kranz & McEachnahan, 1993). When your child demonstrates target behaviors (e.g. making eye contact with his peer) or is successful in relating to his peer (e.g. making eye contact and saying “Hi, Kyle.”), praise him (e.g. “Great job saying ‘Hi’ to Kyle!”), and give him a small piece of his favorite snack. As your child’s learning progresses and he demonstrates these skills independently, you should fade use of this shadowing technique, including use of your prompts and instruction, as well as reducing the delivery of snacks and social praise as rewards. Ultimately, your child’s behavior will be rewarded by playing and talking with his friend, rather than your delivery of verbal and edible praise. It may also be necessary to reinforce the efforts of the peer, particularly if your child is not cooperating.

Many children with autism learn new things by using activity schedules (Kranz & McClannahan, 1998). Therefore, it may be worthwhile to make a “play date schedule” that your child and his friend can follow. This might include pictures of the activities and/or peer. As your child learns, you can gradually fade out the schedule so that the play date becomes more natural. You might also arrange materials so that the children must work together to complete an activity (Koegel et al., 2005). For example, if making cookies, have one child hold the measuring cup while the other pours the ingredients.

When starting out, keep the play dates short rather than stretching them out as long as the child seems comfortable or until something goes awry (Smith, 2001). A five-minute-long successful peer interaction is better than a 30-minute one that ends in a disruptive outburst. It may take several play dates for your child to become comfortable with his peer, and it will take time for him to learn new skills. It may be helpful for your child to have play dates with one particular child until he demonstrates mastery (i.e., independence) of specific skills; then try teaching those play skills with another child.

Since the pioneering work of Dr. Ivar Lovaas (1981), who demonstrated how parents could teach important skills to their children with autism, we have learned many effective ways to teach social and play skills (Leaf & McEachin, 1999; Lydon, Healy, & Leader, 2011; Koegel, Werner, Vismara, & Koegel, 2005; Smith, 2001; Kranz & McClannahan, 1993; Kranz & McClannahan, 1998; Maurice, Green, & Luce, 1996). Consulting with a qualified specialist may be helpful for planning and implementing effective play dates, but remember, you are your child’s first teacher. By using these techniques during guided play dates you are not only teaching your child essential social and play skills, you are teaching him how to have more fun!

References

(Continued on page 20)
Autism Awareness Month at James E. Allen Elementary School by Justin DiScalfani Ph.D and Bonnie Wojcik M.S. Ed.

Autism Awareness Month was an exciting time at James E. Allen Elementary School. The students, staff, and families went all out for autism awareness this April, with several scheduled events. We started off the month with a bake sale fundraiser with lots of goodies baked by staff, sent in by parents, and donated by local businesses to raise money for a vocational workshop for the students. We held group read aloud sessions and students heard stories about autism and disabilities. The whole building participated in a puzzle piece mural, decorated by...
Autism Awareness Month at James E. Allen Elementary School by Justin DiScalfani Ph.D and Bonnie Wojcik M.S. Ed.

every student. We had an awesome fun day with bubble machines, shaving cream, rice bins and a variety of other fun activities to allow students some time to just relax, and have fun. After all, they've earned it!! Finally, on April 26th, we had our own James E. Allen Autism Awareness Walk where students and staff throughout the school wore blue, lined up in front of the school with colorful banners, and walked around the outside of the building. It was truly a touching sight to see all of the students, staff, and administrators of James E. Allen out there supporting autism awareness. Staff and families were asked to donate to support autism awareness by sponsoring the students in the autism walk. Families were told the donations would go directly to ASAT. Staff in our ABA (applied behavior analysis) and STRIVE (structured teaching reinforced in a visual environment, based on TEACCH) programs selected ASAT because we share their vision and are committed to providing our students with the best evidence-based educational experiences possible. We had an overwhelming response and collected over $1500, which exceeded anyone’s expectations! This turnout is clear evidence that support for science-based education and treatment is growing more rapidly now than ever before. We are quite proud to be part of this group of families, students, and organization. We are already looking forward to next year’s autism awareness month!!

Wouldn’t it be great to be able to buy great merchandise AND support ASAT at the same time? Well, now you can! We have three wonderful opportunities available, and they are all online!

· **Tastefully Simple**: Enjoy browsing their wonderful assortment of simple yet delicious foods. Happy to share that 25 new products have been introduced this season. 15% of your purchase will be donated to ASAT! Please visit [www.ts4asat.com](http://www.ts4asat.com)

· **GiftsThatGive.com**: Peruse hundreds of gifts to find just what you're looking for and know that $1 out of every $5 will be donated to ASAT! There is always a reason to buy a gift for someone you love...Father’s Day, birthdays, anniversaries, graduations, weddings, baby showers, and all the other holidays. By shopping at GiftsThatGive.com you can get a gift for someone while making a tax deductible donation of 20% of the purchase price to ASAT

**Kettlebells 4 Autism**: Kettlebells 4 Autism was created with the intention of using Kettlebell Training and Sport as a platform to raise awareness about autism with the goal of support research, and the delivery of evidence-based practices and treatment to individuals with an Autism Spectrum Disorder. All proceeds from the sales of Kettlebells 4 Autism t-shirts, in 2013, will be donated to two beneficiaries: Association for Science in Autism Treatment and the Geneva Centre for Autism in Toronto. Shop to Support at [www.kettlebells4autism.com](http://www.kettlebells4autism.com)
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Training Behavior Analysts Abroad

Education is science’s greatest ally. In this issue we are showcasing the countries that are training the next generation of behavior analysts, many of whom will be somehow involved in providing evidence-based treatment to individuals with autism and supporting individuals with autism to thrive to their full potential. There are 45 universities with Behavior Analyst Certification Board (BACB) approved course sequences outside of the United States, in Canada, China, Croatia, Finland, France, Hong Kong, Ireland, Israel, Italy, New Zealand, Norway, Poland, Portugal, Romania, Russia, Saudi Arabia, South Korea, Spain, Sweden, Taiwan, and UK; England, Northern Ireland, Wales. Course sequences are approved as pre-requisite instruction for certification as Board Certified Behavior Analysts (BCBA®) and Board Certified Assistant Behavior Analysts (BCaBA®), and there are currently, respectively 32 and 30 course sequences, as reported by the BACB in February, 2013. This is great news!

We Are Present in 94 countries

Since our last column in the Fall 2012 issue, we have welcomed subscribers from Bahamas, Bosnia and Herzegovina, Iran, Korea, and Macedonia. Welcome! We are thrilled to see Science in Autism Treatment reach more and more people across the world, and as always, we extend the invitation to contact us to share your experiences learning about and accessing evidence-based information and treatment. Write to us: international@asatonline.org.
The Association for Science in Autism Treatment (ASAT) accepts advertising for the ASAT.org website, newsletter and other ASAT publications to offset its operational expenses. Products or services accepted for advertisement by ASAT will be consistent with our mission to disseminate accurate, scientifically-sound information about autism and its treatment and to improve access to effective, science-based treatments for all people with autism, regardless of age, severity of condition, income or place of residence.

If you share our values, take this opportunity to support our mission and share yours to 7,000 SIAT subscribers interested in autism treatment, services, and products.

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Contact us: asatads@asatonline.org

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Forgive me if I write this one very personally; consider it a personal appeal. I ran the Long Island marathon in early May. I didn’t feel in shape to do so, but only a few weeks after the tragedy in Boston, I felt honor-bound to do so. I thought, “If I could, I should, for those who no longer can.” Ironically, I turned in the second fastest time of my career. It was then time to set sights on New York City.

Memories came rushing back of last year. Team ASAT was all set to go, including extraordinary runner Jonathan Brunot. Five other runners and myself were ready to tackle the course. It was to be my second NYC marathon, following a tradition my dad had set back in the 1970’s. I did some tune-up runs, including a costume fundraiser run for a children’s foundation with my son (me dressed as Captain America and he as an Angry Bird). We had a great time. Two days later, we had six feet of water in our basement, a destroyed laundry room, cars that had exploded on the street, and lived in a town that would not have electricity or running water for weeks. Pieces of our integral training boardwalk were found half a mile away. Even Lorna, my beloved and tough-as-nails mini-cooper convertible couldn’t survive the carnage and was found on a neighbor’s lawn. Hurricane Sandy had visited its devastation on us all.

The New York Road Runners announced the marathon would go on as scheduled, that it would be a rallying point for New Yorkers. As the full impact of the devastation became more fully appreciated, voices were raised in protest. People were without water and we would be putting water on the course for runners? People were without electricity and generators would be used for a race? Displaced people would have to leave hotels for runners flying in? First responders would be assigned to the course instead of to relief efforts? Many of us dropped out of the run. Eventually, it became untenable and only a couple of days before it was to be held, the entire event was cancelled. Melissa Slobin and I ran the Central Park half marathon and marathon months later to make good on the donated monies for ASAT, but quite frankly, it wasn’t the same.

That brings us to this year. This November, the marathon will mean more than it ever has before. This will be the first post-Sandy NYC marathon. This will be the first NYC marathon following the Boston terror attack. I’ll be out there, proudly. Other members of Team ASAT will be out there. Please consider this article an invitation to join them.

ASAT exists to disseminate information regarding evidence-based treatments for the Autism Spectrum Disorders. In a world where hype and marketing are the norm, where anecdotes and testimonials take the place that should be filled by solid research, an organization like ASAT is essential. ASAT cannot do its work without financial support, however.

By joining Team ASAT and participating in the marathon, you will help to raise those funds. The way it works is that you will join the team, and a fundraising page will be set up for you on-line through the NYC marathon and Crowdrise. Your friends and family will then sponsor you to make up your fundraising requirement (which ASAT keeps to the minimum set by the NYRR, but feel free to raise huge sums!).

You have plenty of time to train. If you ever thought about doing the marathon, this is the year. Please consider doing it for ASAT.

Contact Ruth Donlin at asatevents@aol.com if you are interested.
Social Media connects us and makes it easy to support and disseminate our commitment to science in autism treatment. It helps us with our goal to promote and demand accountability, respect, and adherence to evidence. Individuals with autism deserve nothing less!

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Research Review: Classroom application of Functional Analysis

Reviewed by: Laurie Brophy, LCSW BCBA

Why this topic?
Researchers have shown that interventions for problematic behaviors are safest and most effective when selected based on an assessment of the function that the behaviors serve. Therefore, federal regulations now require schools to conduct functional behavior assessments for all students who need an individualized behavior support plan. However, the assessments often consist of indirect measures such as teacher ratings, which are easy to obtain but less useful than a direct observation method called functional analysis (FA) in which the evaluator systematically presents different experimental conditions and records data on the student’s behavior in each of these conditions. Thus, there is significant value in developing FA procedures that are practical to use in naturalistic settings, such as a student’s regular classroom.

What did the researchers do?
Research participants included 10 students (8 boys and 2 girls) who were 6-18 years old and were referred for assessment and treatment of problem behavior at one of two schools for students with developmental disabilities. Student diagnoses included autism (7), Down Syndrome (1), hearing impairment (1), and speech and language delay (1), and their level of intellectual disability was identified as mild (4), moderate (3), severe (2), and profound (1).

The researchers conducted FA using both “trial-based” and “standard” methodologies. The trial-based FAs took place in the student’s regular classrooms and were completed prior to the standard FAs, which were conducted in a designated session room. In both methodologies, experimenters recorded the presence or absence of a problem behavior, time from the start of a trial to the display of a behavior, and data on events that occurred immediately before or after the behavior (antecedents and consequences). In one condition, participants received attention when they displayed problem behavior; in another, participants were presented with demands and allowed to escape or avoid those demands if they displayed problem behavior. A tangible condition, in which participants gained access to a preferred item if they displayed problem behavior, was conducted with participants in which access to tangible was suspected to be a maintaining variable of problem behavior. An “ignore” condition, in which no consequences were given for problem behaviors, was also conducted unless the participant’s problem behavior included aggression.

Trial FA sessions spanned 4-6 days with 8 to 16 trials conducted per day. Each session was 6 minutes long and was divided into three 2-minute segments: Segment 1 was a control condition in which reinforcers were freely available and problem behavior did not result in any planned consequence; Segment 2 was a test condition in which an establishing operation was generated and problem behavior produced a specific consequence; Segment 3 was a repeat of the control condition in segment 1. The occurrence of problem behavior in any segment resulted in a termination of that condition, with the exception of the “ignore” trials. Ignore trials also differed in that they were not alternated – they consisted of 3 consecutive 2-minute segments with the subject seated alone and no access to leisure/activity materials and no planned consequences for problem behavior. In all conditions, experimenters used materials chosen from participants’ classrooms.

During the standard FAs, the conditions were 15 minutes long and were presented in an alternating sequence. Materials were chosen based on an individual assessment of each participant’s preferences. The methods used were based on original studies by Iwata and, likewise, utilized a multi-

In this issue of the newsletter, we have a summary of an article by Bloom and colleagues on the effectiveness of a trial-based functional analysis. The evaluation of this type of functional analysis is exciting because trial-based functional analyses can be conducted in a child’s own classroom which allows for greater access to them. Enjoy!

Sharon A. Reeve, Ph.D., BCBA-D, SIAT Research Corner Coordinator

(Continued on page 28)
element design (i.e. researchers quickly alternate two or more conditions enabling comparison of behavior across conditions). Prior to the FAs, paired stimulus preference assessments (a procedure in which pairs of items are presented systematically and data is collected on the participant’s selections in order to help determine potential reinforcers) were conducted.

What did the researchers find?
For 6 of the 10 participants, the trial-based FA results indicated the same maintaining function(s) as the standard FA procedures. Problem behaviors for these participants appeared to be maintained by escape from demands (2), access to tangible items (1), both escape from demands and access to tangible items (1), or by a combination of factors (2). For the other four participants, FA results did not correspond with standard FA results – that is, they only partially agreed or had no agreement. However, when the trial-based FA was modified and re-administered to two of these four participants, the results did correspond with the standard FA results.

What were the strengths and limitations of the study? What do the results mean?
A definite strength of the study is that it included a larger number of participants than most previous FA studies, thereby increasing confidence in the validity and generalizability of the results. Having participants with varying ages, diagnoses and severity is also beneficial for the study because it helps dispel the notion that FAs are primarily for children with autism or with severe to profound behavioral problems.

A limitation is that the trial-based FA methods in the classroom setting still required a significant amount of time and, all components considered, did not shorten the overall assessment. Also, the authors did not comment on the classroom size or identify other setting events or arrangements that may impact replication of a trial-based approach. An important area for further research would be to replicate the trial-based FA methodology in a general education classroom. It would also be of interest to test the utility of this approach with individuals who do not have an intellectual disability.

Although trial-based FA does not save time, it may make FA more practical or acceptable to parents and school personnel because it takes place in the classroom instead of requiring a separate space. This feature may decrease the possibility of missing important antecedent and consequence stimuli that the student encounters in the classroom. Despite the few limitations of the study, it is clear that the results do suggest that direct FA methodologies within the natural classroom environment are possible and can be a viable alternative to standard implementation.

Shout Outs, Accolades, and Appreciations! By Kerry Ann Conde, M.S., BCBA

ASAT would like to recognize those individuals and organizations who strive to support our mission. Specifically, we would like to thank and send a “shout out” to...
- Autism Curriculum Encyclopedia - ACE, and all companies that help disseminate ASAT through sharing ASAT’s content on Facebook
- QSAC (Anya Silver) recently featured ASAT in their blog to support us. See http://blog.qsac.com
- Rethink Autism continues to post about ASAT on their Facebook page
- NYSABA posted about ASAT’s auction link on their Facebook page
- DJ Cindy Vero of KTU 103.5 FM in NYC for her interview with David Celiberti and Marisa Musachio showcasing ASAT and the Rock’n 4 Autism Awareness concert..
- Thank you to Trumpet Behavioral Health San Mateo for recommending our newsletter on their Facebook page!
- Thank you to BF Skinner Foundation for recommending ASAT on their Facebook page!

If you would like to share information about any initiatives you have undertaken to support ASAT, please write us at publicity@asatonline.org.
Our Champions & Partners

The Organization for Research and Learning, Inc. (ORL) was originally formed in 1998 as Fabrizio/Moors consulting, and reorganized itself as the ORL in 2007. Beginning as a small organization in Seattle with two staff members who served four children during our first year, ORL has since grown to include ten clinical staff members who serve approximately 65 children and families within our private practice. ORL outreach services have affected hundreds of children from places such as Toronto, Pennsylvania, Texas, California, and British Columbia. Throughout this growth and expansion process, we continue to maintain high levels of quality in the services provided. We believe that families have the right to receive science-based services that are individually tailored to the unique needs of their children and the family as a whole. Our services continue to support individuals from the Puget Sound area, in addition to reaching those across the United States and other countries.

Little Star Center is a truly unique and special place for children and families living with autism. This organization was established in 2002 as Indiana’s first center providing applied behavior analysis (ABA) services. Little Star allows families to have the best of both worlds: (1) the intense one-on-one personalized therapy that used to only be available in a home program, and (2) the community feel of a center-based program that allows children with autism access to peers, materials and a sensory-friendly facility. Along with Little Star’s staff of professionals, families are an integral part of their child’s programming which is why Little Star prides itself on having a “family first” philosophy. Based on the fundamental principles of applied behavior analysis (ABA), Little Star provides an atmosphere where children, therapists, and families can interact, support each other and receive on-going training so that each child can reach their full potential in a variety of settings.

Autism Partnership was formed in 1994 to meet the tremendous need for effective services for children diagnosed with autism and their families. Based upon the founders’ extensive and unique experiences in providing behavioral treatment to children, adolescents and adults, we have developed a comprehensive program that provides a variety of services. Our current work incorporates the knowledge gained from the directors’ intimate involvement with the treatment program developed at the UCLA Young Autism Project during the period of 1975-1987; this approach is combined with our more recent experience delivering services in community based settings. As knowledge about effective behavioral treatments continues to advance, we have also made innovations to increase accessibility to greater numbers of children in a variety of settings. Specifically, we have extended the application of this specialized teaching methodology to children who are older, as it has been established that many older children have greatly benefited from intensive behavioral treatment.

Behavior Analysis Center for Autism (BACA) has been providing efficacious applied behavior analysis services to children and young adults with autism since it was established 2009 by Dr. Carl Sundburg and a group of highly trained board certified behavior analysts (BCBA’s). BACA improves the quality of life for every client by ensuring that staff receive and apply intensive, on-going training. BACA is committed to the continuous education and training of its staff by hosting regular seminars and training sessions from its esteemed clinical team; visiting consultants from all over the country are welcomed to come in and consult with staff, deliver training sessions, and to consult with clients to enhance the skills of both staff and clients. Treatment of clients is based on current research findings from the most experienced scholars in the field of behavior analysis in the teaching areas of: language, social, self-help, academic, and employment skills.

The primary goal of STE Consultants has always been to increase our clients’ quality of life by using the technology of Applied Behavior Analysis (ABA). Specifically, STE provides individualized, 1:1 ABA services to our consumers in their homes, schools and community settings. The purpose of our programs is to decrease our client’s engagement in challenging behaviors and increase their functional and socially appropriate behaviors using evidence-based, best practices based on the large body of empirical research that has been conducted in the field of ABA. STE Consultants works with school districts, health insurance companies and state agencies throughout California, New York, Texas and New Mexico. We also operate the only clinic for Autism and Developmental Disorders in Southeastern New Mexico. STE has the capacity to implement TeleHealth programs anywhere in the United States; current TeleHealth states we operate in are Colorado, Ohio, Pennsylvania and Florida.
Does Your Agency Share ASAT’s Values?

ASAT believes that individuals with autism have the right to effective treatments that are scientifically demonstrated to make meaningful, positive change in their lives.

We believe that it should not be so challenging for families to find accurate information about the efficacy of various autism interventions.

ASAT works toward a time…

………. when all families will be empowered with skills in identifying and choosing the most effective, scientifically-validated interventions for their child.

………. when the media will educate and not confuse parents by providing accurate information and asking the right questions.

………. when all providers will be guided by science when selecting and implementing interventions.

What It Means to Be a Sponsor…

ASAT’s sponsors have indicated their support of the following tenets:

1. All treatments for individuals with autism should be guided by the best available scientific information.
2. Service providers have a responsibility to rely on science-based treatments.
3. Service providers should take steps necessary to help consumers differentiate between scientifically validated treatments and treatments that lack scientific validation.
4. Consumers should be informed that any treatment lacking scientific support should be pursued with great caution.
5. Objective data should be used when making clinical decisions.

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These sponsorships not only provide financial support used specifically for our dissemination efforts, but also send a clear message that ASAT’s vision is shared by others within the professional community.

The tasks of educating the public about scientifically-validated intervention and countering pseudoscience are daunting ones, and ASAT appreciates the

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