

Message from Busy Analytical Bee

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It's Busy Analytical Bee's first birthday on the 1st of June and we want to celebrate with a topic of YOUR choice!!



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Busy Analytical Bee

NEWSLETTER APRIL

Welcome to the April edition of Busy Analytical Bee. This month we are discussing vocal self-stimulatory behaviours which is highly common among children and adults diagnosed with Autism. We have also reviewed the look of the newsletter and hope you all like it! Have a great month

VOCAL SELF- STIMULATORY

The cause of self-stimulatory behaviours is largely unknown, although these behaviours are highly associated with children and adults with developmental disabilities, in particular Autism Spectrum Disorder. Self-stimulatory behaviours (SSB) may be referred to as “stims” or “stereotypy” and research indicates that these behaviours are, mostly, maintained by Automatic reinforcement. Autism has three core features and one of those is a pattern of behaviour that is restricted, repetitive or stereotyped. SSB are also noted in other populations, people with other developmental disabilities, people with psychiatric conditions, and also neuro-typical populations. Behaviours that neuro-typical populations can be drumming fingers, biting nails, smoking, for example, which are deemed socially appropriate. Cunningham and Schreibman (2008) state that “stereotypies in autism are distinguished by their lack of developmental and social appropriateness.” and examples of this could be hand flapping, spinning objects, toe walking, echolalia, to name a few. Echolalia and vocal SSB will be the focus of this article.

Vocal SSB can differ in form, from immediate echolalia, delayed echolalia, non-contextual phrases or unintelligible sounds. Echolalia is defined by Charlop (1983) as “pathological repetitions when words are not used in an appropriate way” and can be immediate (parrot-speak, heard directly before the occurrence of echolalia) or delayed (heard in the past). It is suggested that this is due to abnormalities in the frontal lobe because “such behaviours are related to prefrontal abnormalities and damage” Grossi et al (2012). Grossi and colleagues (2012) investigated the environmental conditions that may elevate the frequency of Echolalia. They investigated this in two conditions; induced (participants were asked questions directly) or incidental (caregiver was asked questions in the presence of the participant). The results were correlated with scores of The Vineland Scale and the Observational Rating Scale of Basic Functions. The results indicate that low scores on The Vineland Scale reliably correlated with an increase of echolalia within the Induced condition. This may indicate the additional effort and demand of being asked questions directly increased the frequency of echolalia. It should be noted that echolalia appears to be an important stage of development that children use to develop language. Many researchers have investigated a

variety of approaches to help target this aberrant behaviour.

One successful approach has been Response Interruption and Redirection (RIRD) which has demonstrated efficacy in reducing the frequency of Vocal SSB. Cassella et al (2011) replicated a successful intervention conducted by Ahearn et al (2007). The original study successfully used the RIRD procedure to reduce vocal SSB with four participants. The RIRD procedure involves blocking the response of vocal SSB (response blocking) and then placing a demand following the occurrence of vocal SSB. The procedure used by Ahearn and colleagues (2007) used an Incompatible behaviour of issuing a demand of an appropriate vocalisation. Ahearn et al (2011) found that appropriate vocal responses increased during the RIRD condition, as the therapist presented an echoic or intraverbal appropriate instruction (i.e. “What’s your name?”). In this original study they speculated if an alternative behaviour would be effective as a replacement. Cassella et al (2011) issued a motor imitation demand following the occurrence of a behaviour. Cassella and colleagues (2011) did not observe the same increase in appropriate responses when using the RIRD, however the results did support the intervention in reduction of vocal SSB.

Many procedures that have been used with children with SSB are punishment procedures (reduce the occurrence). However another procedure that has been investigated is Non-contingent reinforcement (NCR). This procedure involves free access to a powerful reinforcer which should reinforce behaviours that are not related to SSB, for example, appropriate play, vocalisations, etc., and this should compete with the automatic reinforcement of engaging in SSB. Some researchers have not been able to yield positive results with NCR alone. Falcomata (2004) investigated the use of NCR with a response cost component (which is a punishment component). They investigated this with one 18-year old and found positive results. SSB reduced to near-zero levels when the NCR and Response cost condition was in place. They used a reversal treatment design (ABCACBC) and during the baseline or NCR alone conditions were in place SSB still occurred. It is also worth noting that the NCR offered in this study matched the vocal SSB in form. The participant engaged in high levels of singing, and during NCR was offered a radio. This can be an important issue with trying to find a competing reinforcer.

It has been noted in research that when an intervention successfully decreases the occurrences of SSB that acquisition increases. SSB may have an impact on the learning. In particular an issue arises when teaching echoics to a client that engages in echolalia. Valentino et al (2012) investigated using the Cues-Pause-Point (CPP) procedure on a child that repeated “say”

when given an echoic task. They discuss in their review about previous researchers suggesting omitting “say” from the instruction, however the authors argue “it is important that a child’s vocal imitative behaviour be evoked under conditions when the “say” instruction is present and when it is absent”. The CPP procedure involves the therapist holding their finger between themselves and the child and says “say” and pauses for 2 seconds and if the child repeated “say” the therapist says ‘ssh’ and represents the instruction. If the child does not emit an incorrect response (echolalia) in the two seconds the therapist moves their finger to the picture of the tact (i.e. boat) and then says “boat”. Correct responding was reinforced. The results supported the efficacy of the CPP procedure.

Echoic behaviours are an important language skill. The echoic has point-to-point correspondence with a verbal stimulus. It has been highlighted as important in the development of language, however, this behaviour can become problematic when it is used inappropriately. There are many different interventions being discussed within the literature. It is important that you support interventions that are empirically supported when implementing anything with a client. You must discuss any intervention with your supervisor and be aware that the BACB Ethical guidelines stress the importance of using reinforcement before using punitive procedures.

Ahearn, W. H., Clark, K. M., & MacDonald, R. P. F. (2007). Assessing and treating vocal stereotypy in children with Autism. *Journal of Applied Behavior Analysis*, 40, 263-275

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Falcomata, T. S., Roane, H. S., Hovanetz, A. N., & Kettering, T. L. (2004) An evaluation of response cost in the treatment of inappropriate vocalizations maintained by automatic reinforcement., *Journal of Applied Behavior Analysis*, 37,83-87.

Grossi, D., Marcone, R., Cinquegrana, T., & Gallucci, M. (2012). On the differential nature of induced and incidental echolalia in Autism, *Journal of Intellectual Disability Research*, 1-10. doi: 10.1111/j.1365-2788.2012.01579.x

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Valentino, A. L., Shillingsburg, M. A., Conine, D. E., & Powell, N. M. (2012). Decreasing Echolalia of the Instruction “say” during Echoic Training through use of the Cues-Pause-Point procedure, *Journal of Behavioural Education*, 21(4), 315-328.

TERMINOLOGY

Differential Reinforcement is a popular intervention that can be applied to a wide variety of behaviours. There are many types of Differential Reinforcement procedures.

DRI—Differential Reinforcement of Incompatible Behaviour: This procedure is the reinforcement of a behaviour that can not occur at the same time as the problem behaviour. The problem behaviour could be out of seat behaviour and the new target behaviour could be appropriate sitting in a chair. These behaviours can not occur simultaneously therefore a DRI procedure may be used

DRA—Differential Reinforcement of Alternative Behaviour: This procedure is used to teach a replacement behaviour that is not necessarily incompatible. An example for this could be calling out and the new behaviour being raising your hand. Both behaviours could occur simultaneously, however raising hand appropriately would be reinforced to increase the probability of the behaviour occurring again.

DRO—Differential Reinforcement of Other Behaviours: This is when reinforcement is delivered for any behaviour when the problem behaviour is not present. This could be used in an instance where Self-Injurious Behaviours occurs. If the child is, for example, hand biting, all appropriate behaviours that occur while the hand is not in contact with the mouth would be reinforced. There are two types of DRO , Interval and Momentary that can be implemented on a Fixed or Varied schedule.

DRL—Differential Reinforcement of Low Occurring Behaviours: This is a procedure that can be used to decrease the frequency of a problem behaviour without eliminating it. This is an appropriate procedure for a child that seeks out the teacher for assistance at high frequency. This behaviour can be disruptive to teaching, however does not need to be eliminated.

DRH—Differential Reinforcement of High rates: This procedure is used to increase the rates of a behaviour using an increasing criteria for a set interval. For example the participant must make 5 responses in 30 minutes to obtain reinforcement, and then the criteria is increased to 8 responses per 30 mins.

DRD—Differential Reinforcement of Diminish rates: Similar to DRH, uses a set interval, however the criteria decreases to slowly decrease the frequency of behaviour.

STUDY TIPS

Behavior Babe has a great website and Facebook page. She offers a lot of great resources on her website that are great for anyone developing their understand of ABA and useful for studying for the exam. You can find terminology, acronyms and SAFMEDS. She also shares videos and materials on her Facebook page. To check out her webpage go to <http://www.behaviorbabe.com> or her Facebook page is www.facebook.com/behaviorbabe.

EVENTS

A two-day workshop is being held by Skybound Autism Therapy in Bristol. The workshop will be presented by Mary Barbera is titled 'Understanding Implementing effective Autism Programming from toddlers to teens'. The workshop will be on the 6th and 7th of May and costs £225 (early bird price until 28th February—plus booking fee) or £250 after the 1st of March. For more information and to book click [here](#).

The UK-SBA have announced a PBS workshop on the 14th and 15th of May. They are hosting Prof Rob Horner, as their guest speaker at the University College London. To attend one day non-members will pay £175 (members £100) or to attend both days non-members pay £250 (members £150). To register click [here](#), although members must ensure they log in before booking.

The BILD PBS International Research and practice Conference is being held in Dublin, on the 6th, 7th, 8th of May 2015. They have many knowledgeable speakers joining them to discuss research and development within the field of PBS (Positive Behaviour Support). The cost of the workshop depends on the package you chose. If attending the 6th (the pre-conference symposium) will cost £50, and to attend both the 7th and 8th (plus refreshments and 1 bed and breakfast) will cost £650 for non-members. Click [here](#) for more information.

Ambitious about Autism have announced many new dates for 2015. There is a workshop in May titled 'Introduction to Autism and ABA'. Be sure to go to their [webpage](#) to find out more and see all available dates.

Jigsaw School are offering numerous workshops and open mornings for professionals and parents. There are a variety of dates available so please go to their [website](#) to find out more.

Knopse ABA is offering two workshops for delegates to learn more about Applied Behaviour Analysis - Verbal Behaviour (ABA-VB). The workshop is split into two parts and part 1 will be 12th-13th June and part 2 on the 14th-15th June. The workshop will be held in Hannover, Germany. For more information, go to the website by clicking [here](#).

Keys for Learning have announced a two day workshop hosted by Tom Caffrey (BCBA, M.Ed), in Edinburgh on the 19th and 20th of June. The cost is £199 for professionals and £149 for parents/grandparents. For more information or to book a place email Gemma at gemma@keysforlearning.co.uk

Peach are offering many courses across 2015. Courses are typically £65 per day (one two day workshop costs £130). There is an initial tutor training course on the 20th and 21st of May (Manchester). For more information regarding other workshops (workshops are being held at a Manchester or Ascot location), then please go to their [page](#).

PEOPLE WHO INSPIRE US

A personal favourite this month; Vincent Carbone. Carbone has worked within the field of ABA for over 35 years and has his own clinic in New York. He studied for his graduate degree in ABA at Drake University, Des Moines, Iowa and he is now a Board Certified Behavior Analyst-Doctoral. He has been involved in numerous research studies based on behaviour analytical approaches and has featured in many peer-reviewed journals, including The Journal of Applied Behavior Analysis. He also has a role on the editorial board for Behavior Analysis in Practice and speaks at many conferences and workshops around the world. To find out more about Vincent Carbone go to his website : <http://www.carboneclinic.com/clinic-staff/>

NET IDEAS

Feet and/or hand painting is an interesting twist on a generic activity. This activity allows opportunities for mands for feet, hands, paper and paint/paintbrush (mand 5M, 6b), or for a missing item (Mand, 6M). The child may also mand using pronouns "paint my feet" vs "paint your hand" or actions (e.g. stamp, walk, jump) and could use adverbs (Mand 8c, 7M, 13f). You can also generalise tacts of different body parts, or tacts of actions ("what am I doing? - painting/jumping/etc") and colours (Tact 5M, 6b, 7a, 8M, 10d). It's great for generalising matching skills of body parts (VP-MTS 10b) or imitation skills (MI 5M). You could also incorporate Intraverbals "you paint with—a paintbrush" or "you wear shoes on you—feet" (IV 7c, 8M). You could also place feet outlines on the paper and have your client place their feet inside to promote motor co-ordination. This activity could also be naturally reinforcing for walking with flat feet if your client engages in toe-walking. Some children really enjoy messy play , although it may require a lot of cleaning after (although great opportunity to mand to clean if you client is motivated (Mand 7c)).

Sundberg, M. L. (2008) Verbal behavior milestones assessment and placement program: The VB-MAPP. Concord, CA: AVB Press

PRODUCTS

This month Busy Analytical Bee has compiled a variety of sensory toys and products for you to check out. Hopefully these items will inspire you or give you ideas for new activities you may not have considered! Go to : <http://www.amazon.co.uk/registry/wishlist/383BVMP5BSH13>

Remember to contact us at our email account busyanalyticalbee@gmail.com and like our Facebook page and Twitter page @AnalyticalBee

Next month we will be looking at the contingency that improve performance within a workplace and business, so be sure to subscribe so you receive the next exciting edition.

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