Busy Analytical Bee

NEWSLETTER June

Welcome to the June edition. We are now celebrating our 3rd Anniversary of the newsletter! I would like to take this opportunity to thank you all, as without you this newsletter would not have continued. It continues to grow and develop and I look forward to another year of disseminating research and terminology and promoting the field! Please share the newsletter with friends, colleagues, supervisors/supervisees and parents who are interested in learning more about Applied Behaviour Analysis (ABA).

In this edition we discuss increasing safe driving behaviours using ABA, the career of Brian Iwata (*people who inspire us* section) and playground games as an activity. I am also very pleased to welcome Robert Schramm MA BCBA to this edition in this interview edition! Such a honour to talk to him about his contributions to the field.

Kirsty Angel M.Sc. BCBA (Author)

USING APPLIED BEHAVIOUR ANALYSIS (ABA) TO INCREASE SAFE DRIVING BEHAVIOURS

On the 10th of August 2016, Tracey Houghton and her two sons, Ethan (aged 13) and Josh (aged 11) and Tracey's partner's daughter, Amy Goldsmith (aged 11) died in a horrific collision on the A34, in Berkshire. They were involved in a car crash, involving eight vehicles. The crash was caused by Tomasz Kroker, who was changing music on his mobile devise whilst approaching a junction with stationary vehicles. Kroker was charged with 10 years in jail. This incident sparked a heavier enforcement on drivers who use mobile devices whilst driving. The penalty for using a mobile device whilst driving is 6 penalty points and a £200 and if you are taken to court, you may also be banned from driving or riding and receive a fine of up to £1000 or £2500 if you drive a lorry or bus. If you have only been driving for 2 years and are caught using a mobile device behind the wheel, you'll lose your license. To learn more visit the GOV page.

Picture from https://flic.kr/p/ddAJG

Over recent years, technology has developed and mobile devices now have a larger number of functions. Unfortunately, drivers may still use mobile devices whilst driving to not only make phone calls, but also to check social media, connect to google maps (for directions), play music, or write or read text messages. And research has shown that using a mobile devise is extremely dangerous. McEvoy, et al (2005) found someone "using a mobile phone when driving is four times more likely to have a crash that will result in hospital attendance". This makes this issue socially significant, because decreasing unsafe driving behaviours, and mobile use whilst driving, can protect people from serious injury, or death.

In addition to using mobile devices while driving, other unsafe behaviours include not wearing a seat belt, eating whilst driving, not sticking to appropriate speed limits, etc.. Unfortunately the punishing contingencies of engaging in these behaviours can be avoided by drivers, and the undesirable consequences (fines, penalty points, or physical harm, or a collision) can be uncertain. Fuller (1991) discusses this issue in his paper, in which he discusses behavioural traps. Fuller explains that a drivers unsafe driving behaviours are shaped up into riskier and riskier behaviours through reinforcement. For instance, driving faster is reinforced by arriving at a destination in less time and the consequence may be reinforced when the driver arrives unharmed without any of the undesirable consequences. Fuller states that unfortunately "the natural contingencies of the roadway environment are often not adequate to

establish and maintain safe driving behavior" and also that this issue is "crying out for systematic attention from behavior analysis".

Using the principles of ABA, researchers have hoped to change the behaviours of drivers to increase safe driving behaviours (Clayton et al, 2006 and Ludwig & Geller, 1991). One intervention focused on using active prompting, which used a sign close to a car park exit (Clayton et al, 2006). This study focused on increasing the use of seat belt wearing and decreasing mobile phone use whilst driving. The active prompt involved a sign which said either "Please Hang up—I care" or "Please Buckle up—I care" depending on the intervention, and then on the back of the sign said "Thank you". During the intervention all drivers were shown the message which applied to that intervention and when drivers complied the student (who was prompting) would turn the sign and show the "Thank you" message. During the baseline the researchers observed that seat belts were being worn 44% of the time, and that drivers were using their mobile phone 6% of the time. During the first phase, in which mobile phone use was targeted, the same percent of people were observed using their phone, but hung up when asked to. During this phase seat belt use increased to 56%, despite not being prompted directly. In the second phase when seat belt use was targeted, this behaviour increased to 78% of people using their seat belt when prompted, although mobile phone use was 7% (similar to baseline), but prompting for seat belt use did not lead to people hanging up their phone. The researchers also observed one block away, and found that drivers who began using their mobile phones again, after they had hung up, was 36% which is about a third, but no drivers unbuckled their seat belt. This study shows that this intervention could be effective in reducing unsafe driving behaviours.

Pizza drivers are regularly driving and are expected to deliver pizzas quickly and promptly. This means they may drive at speed, and often wouldn't wear seat belts to ensure that they can get in and out of the car quickly when making deliveries. Ludwig & Geller (1991) focused solely on increasing seat belt wearing in pizza delivery drivers, using a multiple baseline design across settings. An awareness session was given to drivers, which discussed issues and statistics around the dangers of not using seat belt appropriately and then asked the drivers to sign a commitment card to say they would buckle up whilst delivering pizzas. The promise card had a stub, which could be removed and was entered into a raffle, so one driver won a prize at the end of the awareness session. On the first day of the intervention, drivers were reminded of their promise, and signs were placed within the pizza preparation area so that drivers would see these regularly. The mean seat belt use at one location was 41% during baseline, and then rose to 68% during the intervention and was 69% during follow up. The mean seat belt use at a control site was 45%, which supports the efficacy of the intervention.

Picture from: https://flic.kr/p/pmQoSn

This research is promising that interventions based on ABA can be effective in increasing safe driving behaviours. It is well known that danger is reduced if you are involved in a collision, but are wearing a seat belt. In addition, recent research has highlighted the dangers of using a mobile phone whilst driving. Further research is required to help us understand how to further reduce these behaviours and reduce other unsafe behaviours.

Clayton, M., Helms, B., & Simpson, C. (2006). Active prompting to decrease cell phone use and increase seat belt use while driving, *Journal of Applied Behavior Analysis*, 39, 341-349.

Fuller, R. (1991). Behavior Analysis and unsafe driving: Warning—learning trap ahead! *Journal of Applied Behavior Analysis*, **24**, 73-75.

Ludwig, T. D., & Geller, E. S. (1991) Improving the driving practices of pizza deliverers: response generalization and moderating effects of driving history. Journal of Applied Behaviour Analysis, 24, 31-44.

McEvoy, S. P., Stevenson, M. R., McCartt, A. T., Woodward, M., Haworth, C., Palamara, P., & Cercarelli, R. (2005). Role of mobile phones in motor vehicle crashes resulting in hospital attendance: a case– crossover study, *BMJ,* doi:10.1136/bmj.38537.397512.55

Department for Transport, (2017, February, 2), Reported road casualties in Great Britain: quarterly provisional estimates year ending September 2016, retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/588773/quarterly-estimates-july-to-september-2016.pdf

Interview

Robert Schramm

Such an honour to welcome Robert Schramm MA BCBA to this interview edition. Robert was born in America and lived in Los Angeles, California. He worked as a Special Education Teacher and then began specifically working with children with Autism. In 2004, Robert moved to Germany and he now runs Knospe ABA with his wife Nadine. He has supported many families and he regularly runs workshops in Germany and the UK. He is definitely one of my ABA heroes, so I'm excited to learn more. So Robert, please tell us a little bit about yourself first.

Hi, I'm a very handsome and intelligent 48 years old who likes sports, warm weather… oh wait, I see what you mean. Let me start again. Hi, I was originally an educator from Illinois in the US, who found his way to Special Education, then Autism Specialist based on following my heart in finding the best supports for the kids I was least able to help at the time. At some point, I began to focus solely on autism intervention as these were the kids getting the least meaningful support in the schools that I worked in. I gained experience as a Special Education Teacher, an Adapted Physical Education teacher and an Inclusion specialist all before learning about ABA.

So how did you become involved in ABA?

As an inclusion specialist I was charged with helping children with sometimes severe disabilities access their curriculum in the regular education classrooms. Although mostly successful, there were certain children with autism that proved to be the most challenging for the school system and my own teaching ability. I began to learn as much as I could about autism intervention studying, PECS, Sign Language, Play Therapy, and TEACCH. Eventually I was introduced to the principles of behaviour by a Behaviour Analyst who came in to do a functional analysis for a child we were failing to help. His explanation of the principles of behaviour and their application was so clear and meaningful to me that I started studying to become a Board Certified Behaviour Analyst

Who has been influences your career, in special education and in ABA?

As a special education teacher I had a mentor who took me under her wing when I first started teaching named Sharon Grandinette. She was a very hard working and conscientious Special Education Program Specialist who seemed to see something in me and helped motivate me to pursue special education as a focus. Sharon is now an important person in the field of Traumatic Brain Injuries. Once I began studying ABA, I become mesmerized with the work of the ABA professionals who were at the forefront of developing the Verbal Behaviour Approach to ABA. Dr. Mark Sundberg, Dr. Vincent Carbone, Dr. Jack Michael, Dr. Jim Partington among others. I've learned all I can from them over the years, reading their research or attending their workshops and seminars. I now hope that I, along with some of my favourite BCBA colleagues Steve Ward, Megan Miller, Mary Barbara and others, can start to be that sort of inspiration for the next generation of Behaviour Analysts. Professionals learning about how to best prioritize motivation and verbal behaviour in their ABA programming.

On your website you use the term ABA with Verbal Behaviour (ABA/VB), why do you use this approach opposed to Traditional ABA?

ABA is a scientific approach to understanding how and why we behave the way that we do. This understanding then allows us to apply the principles of behaviour to help solve societal problems. In the case of autism intervention that includes using the principles of behaviour and evidence based procedural recommendations to help guide the education and/or therapeutic needs of a specific child. Traditional ABA has developed based on the research and approach of Dr. Ivar Lovaas and others related to Skinners book "The Behaviour of Organisms." This approach began as a clinical endeavour and many of the recommendations evolved from the clinical view point. The benefits of ABA with Verbal Behaviour (ABA that prioritizes the research and recommendations related to Skinners later book "Verbal Behaviour") is that it helps to

Knospe Logo

break down language functionally and due to the work of Dr. Jack Michael and others, offers a more complete understanding of the importance of the concept of motivation in teaching. In simplistic terms, ABA looks at how to best teach needed skills to a child and ABA/VB looks at how to best get a child to want to learn the skills you need to teach them.

Can you explain the importance of the Seven Steps and Instructional Control?

The 7 Steps to Earning Instructional Control is an attempt to teach the necessary aspects of gaining co-operation to non-behaviourists so that they can have an easily replicated path to success across a large number of children. It is based on the same behavioural principles and recommendations of ABA/VB programs but it is packaged in such a way as to allow you to earn instructional control without the need for Escape Extinction. Escape Extinction is the use of escape blocking, forced physical prompting and/or repeating instructions in a nagging fashion to try to block a child's attempts to escape a teaching task. Although Escape Extinction is shown in the literature to be a successful part of earning instructional control, it is often not easy to achieve, can escalate interactions to aggression, and can be undesirable to parents and school personnel. It is also not universally successful. A way to earn instructional control without escape extinction is in my mind "The Holy Grail" in behavioural education and I believe the "7 Steps" offers us just that.

This paper is available online for people to read. Final question, What are your hopes for the future of ABA?

I would like to see the experimental side of Behaviour Analysis become more adept at identifying procedural recommendations in real life environments. Isolating conditions beyond what is available in the general daily life where ABA is needed is sometimes counter-productive. In the application side of behaviour, I would like to see us continue as we have in the direction of more flexible "child and family friendly" approaches. I'd like to see more training opportunities for Behaviour Analysts in Europe and more awareness in general society of the value, flexibility and appropriateness of what we have to offer.

Thank you to Robert for this insightful interview. I am very grateful that you took the time to join us for this interview! If you want to learn more about Robert and his work, you can visit the Knospe website.

PRODUCTS

This months wish list contains some essentials books for studying for the BACB's exam. This includes text books and books with multiple test questions. Good luck in your studies!

NATURAL ENVIRONMENT TEACHING (NET) IDEA

Playground games make great NETs with peers or siblings. Two popular games are "What's the time Mr. Wolf?" and "Duck, duck, goose". There are YouTube clips to teach you how to play "What's the time, Mr Wolf?" and "duck, duck, goose". These games are suitable for children that are developing social skills as it offers many learning opportunities for play and social skills. You can do these NET during play dates or in a school or nursery setting during playtime. You can also play these at home with siblings. These games teach children to tolerate being in a group with their peers and engage in group play (SBSP 4d, 4M, 6c). Both games involve chase so you can teach your client to chase peers and be chased (SBSP 6b), and this may act as a reinforcer. It also offers opportunities to teach imitation of peers (SBSP 5b, 5M, 6e). When your client is familiar with the game you can begin fading your prompts and allow them to join in the game more independently (SBSP 7c) or playing the game independently (SBSP 8M). Also, this game involves mands, for instance, when the Wolf replies with the time, he wants the children to move closer, that many steps, or when the child says "goose" they are motivated to be chased by that child. That means these games offer opportunities for you client to request to peers (SBSP 7a, 10a) and respond to their peers requests (SBSP 8c, 9c, 9M). In addition, requesting peers to join the game (SBSP 10M). These game also teach those all important turn taking skills (SBSP 11c,)

Preceding skills reference to the VB-MAPP Assessment tool:

Taken from: https://flic.kr/p/TwRQFN

Sundberg, M. L. (2008) Verbal Behavior Milestones Assessment and Placement Program: The VB-MAPP. Concord, CA: AVB Press.

*SBSP: Social Behaviour and Social Play

EVENTS

South East Association of Behaviour Analysis (SEABA) are holding their annual conference in Tunbridge Wells on the 16th and 17th June. Tickets are available through their website.

Ambitious About Autism run regular workshops for parents and professionals. They cover a wide variety of topics, including Autism, ABA and about other issues including exclusion, discrimination, etc.. To find out more, visit their website.

Association of Behavior Analysis International (ABAI) will be happening on the 14th-15th of November 2017, in Paris, France. This is the Ninth International Conference. For more information and to book your place click here. The cost is $700 (£559.64 approximately).

Keys for Learning are hosting a workshop with Bobby Newman on Monday 25th September in Edinburgh. There is more information to be released so check the website regularly.

TERMINOLOGY

Abative effect: The abative effect of a motivating operation (MO, aka Establishing Operation, EO) is when the frequency of a behaviour reduces, due to reinforcement which matches the MO. For instance, when thirsty, certain behaviours (going to the fridge or tap, sipping from a glass) are reinforced by the drink. When you become satiated (thirst need is satisfied), an abative effect is observed as the behaviours (sipping from the glass, going to fridge etc.) reduce in frequency as the reinforcer has been obtained.

Evocative effect: The evocative effect of a MO is when the frequency of a behaviour increases due to reinforcement which matches the MO. Similar to previous example, when you have not drank for a long time (deprivation) an evocative effective of the motivating operation for drinking increases the frequency of behaviours that obtain reinforcement. This means going to the fridge or tap or sipping a drink (behaviours) increase in frequency.

Picture from :https://flic.kr/p/iCXrT

PEOPLE WHO INSPIRE US

This month we are looking at Brian Iwata, the developer of the Functional Analysis. Brian Iwata began his career studying psychology at Florida State University in the early 1970s and then began to study for his PhD in Clinical and School Psychology. He worked with Jon Bailey, who was his professor, and began to develop a keen interest in ABA. Whilst working in Baltimore within a hospital setting, Brian and his team worked to tight time schedules with clients. During this work he realised a need for an assessment that could analyse contingencies to help select an appropriate intervention and reduce intervention planning time. Hence the functional Analysis was born. He has since held many positions as a director of programmes and as a professor at University of Florida. In addition throughout his career Brian Iwata has held many editorial positions, including the Journal of Applied Behaviour Analysis. He has also authored over 200 research papers. Brian Iwata is someone who inspires us as he has had such a impact of the development within the field. The development of the Functional Analysis has been such a useful tool. For more information about Brian Iwata, watch this interesting interview on YouTube.

STUDY TIPS

Attending workshops is a great way to help your studying! I always feel very inspired and motivated after I have been to a conference or workshop. Of course you have the added bonus to applying and developing your knowledge by seeing different material and research, and obviously you can ask questions! It's also a great opportunity to network, which is important for all budding Behaviour Analysts. Check out the events section to find a workshop near you!

Next month we're looking at *setting events*, so be sure to subscribe so you receive the next exciting edition.

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