



Busy Analytical Bee

NEWSLETTER MAY

Welcome to the May edition. This month we have looked at the research in smoking reduction/abstinence, the career of Dr. Jon Bailey BCBA and have included a marble run activity. Have a great month!

Kirsty Angel M.Sc. BCBA (Author)

WANT TO QUIT SMOKING?

CONSIDER APPLIED BEHAVIOUR ANALYSIS (ABA)!

Smoking has a significant social significance to the population. Smoking has significant implications to health, being strongly correlated with cancer, heart disease, various respiratory infections and diseases and poor dental and oral health. Tobacco smoke carries "over 7,000 chemical compounds ... These include carbon monoxide, arsenic, formaldehyde, cyanide, benzene, toluene and acrolein" (Action on Smoking and Health; ASH, 2015) Many people that do not smoke may find it unpleasant to be around people who are smoking. Since 2007 it has been illegal to smoke in and enclosed public place in England (July 2007), Wales (April 2007), Scotland, (March 2006) and Northern Ireland (April 2007). Also recently (October 2015) it became illegal to smoke in a car that is carrying children (defined as someone under the age of 18 years). This law

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applies in England and Wales. In addition to this, there is lots of support, from charities and the NHS, to encourage people to stop smoking and, subsequently, improve their health.

Despite these laws and publications about the health implications, statistics from ASH show that around 10 million adults smoke in Great Britain (one-sixth of the total population). ASH also indicate that "two-thirds of current smokers would like to stop smoking but only about 30%-40% make a quit attempt in a given year" (ash.org.uk Fact sheet). Unfortunately, smoking is addictive and most people that begin smoking find it difficult to stop without support, and becomes increas-

ingly difficult the longer someone smokes. There are many ways to give up smoking, using a variety of nicotine based products (patches, chewing gum, inhalers, and many more) to decrease cravings while people change their habits. These products decrease in nicotine strengths and when followed appropriately through advised steps, can naturally decrease the persons dependency on nicotine. [The National Health Service \(NHS\)](#) also offers support and services to aid people who wish to stop smoking. Using the NHS services 50% of people successfully quit smoking between April 2013-March 2014. This emphasises the difficulty faced by people who are willing to stop smoking and are provided with adequate support. So can ABA have an impact on increasing the success people experience?

ABA strives to focus on socially significant problems, and considering the health implications and the difficulty faced by many people to quit then this topic is of major importance. The main way abstinence from smoking is measured is by carbon monoxide (CO) levels in the breath. CO remains in the breath for approximately 6-8 hours following smoking at high levels. By measuring CO levels regularly throughout the day, researchers can discern whether or not someone has been smoking. If it is a negative reading, this means the person has low levels of CO in their breath and have not been smoking. This method was used in two recent studies (Dallery et al, 2013, and Romanowich & Lamb, 2015) where researchers helped participants abstain from smoking. They use an approach called Contingency Management (CM), which Romanowich & Lamb explain is "a general approach to treatment in which reinforcement and punishment contingencies are applied to change behaviour effectively". In these studies in particular (Dallery et al, 2013, and Romanowich & Lamb, 2015), the CM consisted of positive reinforcement (money) contingent upon a negative reading of CO.

Dallery et al (2013) used an internet based intervention, so that participants could deliver their CO read-

ings at home. They also compared two groups of participants, one group that received their reward contingent upon a negative reading of CO and a control group that received the money regardless of whether their CO reading was negative or positive. They found that the internet based delivery of this intervention to be successful and that participants that received reinforcement following a negative reading had more success with giving up smoking (compared to the control

Taken from: <https://i1c.krip/>



group). Also in their paper, Romanowich & Lamb (2015), used the same procedure, however they delivered it on a University campus, and people had to go to the

Health Center to have their readings conducted. This was effective as the participants lived in close proximity and/or worked at the University. They had three groups, including a control. The two other groups received a fixed amount every week for completing a successful (negative) reading, which was \$19.75 and the other group received an escalating amount, which increased started t \$5.00 and increased by \$0.50 each week. Both groups could receive the same amount of money in total by the end of the study. In this study they found that the escalating reinforcement group had a high degree of success as “escalating reinforcement participants were able to maintain longer continuous periods of smoking abstinence” (Romanowich & Lamb, 2015).

The research into smoking and the efficacy of the different reinforcement schedules on quitting is very interesting and can have important influences in other areas (specifically escalating schedules may have success in other behaviour change procedures). It may be difficult to deliver these interventions on a large scale as it may be difficult to fund.

Dallery, J., Raiff, B. R., & Grabinski, M. J. (2013) Internet-based Contingency management to promote smoking cessation: Randomized controlled study. *Journal of Applied Behaviour Analysis*, **46**(4), 750-764, doi: 10.1002/jaba.89.

Romanowich, P, & Lamb, R. J. (2015). The effects of fixed versus escalating reinforcement schedules on smoking abstinence. *Journal of Applied Behaviour Analysis*, **48**(1), 25-37, doi: 10.1002/jaba.185.

["Smoking Statistics."](#) Action on Smoking and Health, Sept. 2015. Web. 30 Apr. 2016.

["Smoking and disease."](#) Action on Smoking and Health, July 2015. Web. 30 Apr. 2016

STUDY TIPS

A great way to study is to attend workshops and conferences. It's a great way to learn about the field, techniques and research and network with other professionals in the field. You can also ask questions to presenters who will have vast experience and knowledge within the field. The [Behaviour Analysts Certification Board \(BACB\)](#); 1.03 in [Professional and Ethical Compliance Code for Behavior Analysts](#)) recommend you do this when you are certified, but it is beneficial to all professionals within the field to be aware of current techniques and research within the field (whether you seek certification or not).

BACB, *Professional and Ethical Compliance Code for Behavior Analysts*. Behavior Analyst Certification Board, 2015. <http://bacb.com/wp-content/uploads/2016/03/160321-compliance-code-english.pdf>

EVENTS

The annual [Division of Behaviour Analysis](#) Conference will be held on the [Friday 10th June](#) (Non members– €110) and [Saturday 11th June](#) (Non members– €100) , in National University of Ireland, Maynooth. Speakers include Jon Bailey, Ph.D., and Peter Sturney. Please follow the relevant links to find out more information and to book a place.

Kevin Vowles and Gail Sowden will be presenting a workshop on [Interdisciplinary ACT for Chronic Pain](#). This will take place in Manchester on Saturday 18th and Sunday 19th of June (9am-5pm). Tickets cost £233.29 (early bird tickets are no longer available).

[Child Autism UK](#) offer a variety of courses throughout the year. There are courses covering topics like “Increasing motivation”, “School Shadowing” and much more!

Carole Roxburgh BCBA and Jamie Weinlein BCBA of the Carbone Clinic will be running a hands on training for teaching Verbal Behaviour. This will run from 12-14th July in Chester. For more information email Carole directly at croxburghcarboneclinic@gmail.com.

Autism Partnership are holding a one day workshop on Friday 17th of June in Leeds. The workshop is an Introduction to ABA, including topics about functions of behaviour, reinforcement, discreet trail training and developing behavioural strategies. The workshop will cost £50 per person. To book a place contact the Therapy Center, Leeds, 0113 2509275 or by [email](#).

PEOPLE WHO INSPIRE US

This month we are celebrating Dr. Jon Bailey BCBA. He has had a significant impact on the field of ABA. He obtained his PhD from University of Kansas in 1970. That year Dr. Bailey was contacted by Dr. Charles Madsen to fulfil a position as a Behavior Analyst at Florida State University (FSU). Whilst he worked at FSU, in 1970 he was a member of the state review committee for Behavior Analysis. In the 1980s Dr. Bailey founded the [Florida Association for Behavior Analysis](#) (FABA). The aim of FABA is to promote ethical and effective practise within the field and offer continuing education. He also set up the meetings for Organizational Behavior Management Network in the 1990s. Dr Bailey has published over 100 research articles and also co-authored the following books with Mary Burch, *Research Methods in Applied Behavior Analysis*, *How Dogs Learn*, *Ethics for Behavior Analysts*, *2nd Expanded Edition*, *How to Think Like a Behavior Analyst*, and *25 Essential Skills and Strategies for Professional Behavior Analysts*. He has also been rewarded for his hard work and dedication to the field by receiving the *Distinguished Service to Behavior Analysis Lifetime Achievement Award*, in 2005. Dr. Jon Bailey BCBA is semi-retired and continues to work as a professor at FSU.

TERMINOLOGY

The Premack Principle is a behavioural tool that can be used to increase the likelihood of someone engaging in a low probability response or behaviour. A low probability response or behaviour is a behaviour in their repertoire that is not consistent in frequency. The Premack Principles outlines that to increase the frequency of these behaviours, they should be followed by a high probability response or behaviour (a response or behaviour that is engaged in at a high frequency). The Premack Principle is often referred to as *Grandma's rule*. This rule is typically "if you eat your peas, you can have ice cream", where eating peas is a low probability behaviour and eating ice cream is a high probability behaviour. This means eating peas will increase in frequency if followed by eating ice cream. Some other examples are, if I go to the gym I can get a massage or if I study for an hour I can watch a movie. These contingencies encourage low probability behaviours and the high probability behaviours act as reinforcers.

NET IDEAS

A great NET is marble run. If you don't have a shop bought game you could make a one, for example with a card tube from inside a wrapping paper or kitchen roll and add some marbles. To build the marble run you can have lots of mands for tubes, or if you are creating your own at home additional bands for sellotape (Mand 5b, 6b, 9M). Some actions mands to work on could be build, stick, put together (Mand 7M). In a shop bought game, the tubes are usually different colours so you can practise mands for a specifically coloured tube, for instance "blue tube", "can I have the red tube" or "build with the yellow tube" (Mand 8M, 13M). You can also tact colours, or the various parts of the marble run (tact 6M). When the marble run is ready you can contrive motivation for mands for marbles, go, my turn, your turn when putting marbles down the tube (2d, 4c, 5b, 5M, 6b, 9M). You can also block part of the marble run so the marbles can not continue rolling down and this can be another opportunity for a "go" mand, or a mand for removal, such as "Move your hand", or "let go" (mand 12M). This activity supports important play skills, of putting toys together, (independent play 5e, 10M) and appropriate play (independent play 7M).

Preceding skills reference to the VB-MAPP Assessment tool:

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

PRODUCTS

This months [wish list](#) is a collection of tools you can use with children that allow them to access sensory input. By accessing these tools and the sensory input they seek, it can reduce the likelihood of inappropriate behaviours occurring.



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Remember to contact us at our email account busyanalyticalbee@gmail.com and like our Facebook page and Twitter page @AnalyticalBee
Next month will be our 2nd Anniversary Special Edition so be sure to subscribe so you receive the next exciting edition.
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