



# Busy Analytical Bee

NEWSLETTER August

Welcome to the August edition. In this edition, I review the research into supporting drug rehabilitation. There is a list of essential assessments in the product list and an exciting arts and craft activity in the NET section. We celebrate the career of the amazing Russ Harris. There is also a list of upcoming events and a study tip. Have a great month!

Kirsty Angel M.Sc. BCBA (Author)

## DRUG REHABILITATION USING BEHAVIOUR ANALYSIS APPROACH

The definition of a *drug* is a medicine or substance that has a physiological effect on the body when taken. This includes illegal and legal drugs and some are more harmful than others. Examples of illegal drugs include heroin, marijuana, cocaine, etc. and examples of legal drugs include, alcohol, tobacco/nicotine, Valium, Codeine, morphine, etc. The legal drugs are not necessarily dangerous and some of the ones listed above are medications that may be prescribed to help illnesses, although if abused they can be highly addictive and extremely harmful. Drug addiction can be extremely damaging to a person's life, as well as having significant impact on their health. It can be difficult to recover and requires a lot of work and commitment from the person themselves, but support from services can be provided. Addiction is also related to how people discount delay reinforcement; *delayed discounting*. This relates to someone's ability to wait for a bigger reward (e.g., one pound today or two pounds tomorrow). People who steeply discount (find it more difficult to wait for the bigger prize) are highly correlated with having an addiction. "Alcohol and drug use provides immediate subjective reward through feelings of euphoria and stress reduction, whereas the potential negative consequences of the substance use are delayed" Dennhardt, et al (2014).

In a report published by the NHS, in February 2018, statistics from 2016-17 show that there were 7,545 hospital admissions due to drug related incidents (England) and 2,593 deaths related to drug misuse (England and



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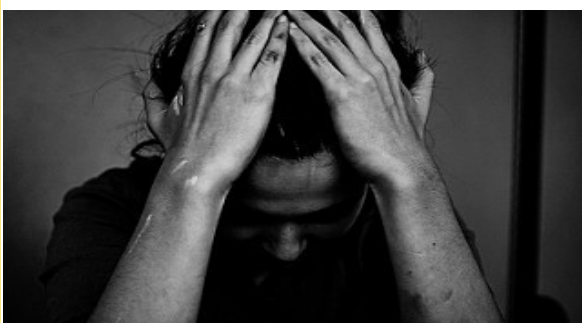
Wales). DrugWise reported that 141,714 drug related offences were committed between 2015-2016. Possession and disruption of drugs is an illegal offence, but in addition people commit various other criminal offences relating to drugs; either due to the effects of taking drugs (e.g., public disorder, driving offences), and/or to obtain money to buy drugs (e.g., stealing).

Contingency management has been explored by Marlowe, et al (2008) for people who were attending drug court for drug related crimes, who also had drug dependency. This involved money incentives being delivered when the court felt the person had made sufficient progress, in regards to being abstinent of drugs (providing negative urine tests) and attendance to hearings and services (e.g., therapy). Typically the only "reward" for being successful at drug court, is having the charges dropped (negative reinforcement). Marlowe et al (2008) compared a control group and two contingency management groups; escalating (vouchers value increased each time awarded) and non-escalating (vouchers value same each time). Most participants completed the phases (13 months). The results supported previous research that more significant criminal history was related to poorer outcomes. This study did not find any significant difference between the conditions with negative urine samples, although there were many barriers to this study. The total value of the vouchers received during this study was lower compared to other CM studies (total of \$390.00 compared to \$1,000.00 in other studies), the vouchers were delivered less frequently (4-6 weeks) and there was no specific target behaviour selected. Having no specific target behaviour may have made the reinforcement less effective, and the authors report "providing a reinforcer for a drug-negative urine sample would be problematic for many drug courts if the participant had recently

missed treatment appointments, lied to his or her counsellor, or committed a new crime”.

Contingency Management can be extremely costly, so an alternative is employment-based reinforcement which has been explored by Silverman et al (2007). This study involved adults who were receiving methadone treatment, and were also found to be using cocaine, being placed in employment and earning money through their role. Finding employment following drug abuse recovery can be extremely difficult and can lead to a relapse. This study compared work only (WO) group and work and abstinence (WA) group. The WA were required to provide a negative urine sample before being allowed access to the work area. The WO group had no restriction to work. The results showed that the WA group provided significantly higher drug free urine samples (29%, compared to 10% for WO group). However, attendance to the work area by the WO group was significantly higher (71% of days attended, compared to 39% for the WA group).

Another possible approach is Acceptance and Commitment Therapy (ACT). ACT relies on 6 core principles which in relation to drug rehabilitation helps people accept their “cravings” and taking committed actions towards their values (which may be to be a better person, student, parent, etc.). Twohig et al (2007) investigated reducing marijuana use in three participants. Whilst attending ACT sessions the marijuana use reduced in the three participants to zero, but two began using again at reduced levels in 3-month follow-up. Two of the three participants also reported or showed decreases in anxiety, depression and withdrawal symptoms through self report or in assessment scores. The other participant scored in the mild range for depressive symptoms in one assessment, which reduced slightly following ACT treatment, but returned to the mild range at the follow-up. This supports the efficacy of ACT as treatment for drug use, in particular with marijuana users. Further research would be necessary to explore if this is effective with other drug users.



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Many Behavioural Principles can be used to develop successful interventions to support drug rehabilitation. Research is helping us develop a deeper understanding of how we can support people with drug addictions. It is also helping us understand how addictions develop, by developing our understanding of delay discounting.

Dennhardt, A. A., Yurasek, A. M., Murphy, J. G. (2014). Change in delay discounting and substance reward value following a brief alcohol and drug use intervention, *Journal of the Experimental Analysis of Behavior*, **9999**, 1-16.

DrugWise, *How many drug crimes are committed?*. Retrieved from: <http://www.drugwise.org.uk/how-many-drug-crimes-are-committed/>

Marlowe, D. B., Festinger, D. S., Dugosh, K. L., Arabia, P. L., & Kirby, K. C. (2008). An Effectiveness trial of contingency management in a felony preadjudication drug court, *Journal of Applied Behavior Analysis*, **41**, 565-577.

NHS Digital, *Statistics on Drug Misuse: England, 2017*. Retrieved from: <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-drug-misuse/2017>

Silverman, K., Wong, C. J., Needham, M., Diemer, K. N., Knealing, T., Crone-Todd, D., Fingerhood, M., Nuzzo, P., & Kolodner, K. (2007). A randomised trial of employment-based reinforcement of cocaine abstinence in injection drug users, *Journal of Applied Behavior Analysis*, **40**, 387-410.

Twohig, M. P., Shoenberger, D., & Hayes, S. C. (2007). A preliminary investigation of Acceptance and Commitment Therapy as a treatment for marijuana dependence in adults, *Journal of Applied Behavior Analysis*, **40**, 619-632.

## PRODUCTS

It's helpful to invest in assessment tools. These help you assess current skills, progress of skill acquisition/interventions, and guide you in developing interventions. Here are links to a variety of assessment tools:

- [Verbal Behaviour Milestones Assessment and Placement Program \(VB MAPP\)](#). By Dr. Mark Sundberg.
- [Assessment of Basic Language and Learning Skills—Revised: An assessment, curriculum guide and skills tracking system for children with Autism or other developmental disabilities. \(ABLLS-R\)](#) By Dr. James Partington
- [The Assessment of Functional Living Skills \(AFLS\)](#). By Dr. James Partington
- [Essential for Living](#). By Dr. Patrick McGreevy.
- [PEAK Relational Training System](#). By Dr. Mark Dixon

## STUDY TIPS

If you are studying or practicing in the UK, then a great Facebook page to follow is [The Very British Behaviour Analyst](#). This is a supportive group that discusses ethical issues. It's a great place to share questions or ideas!

## NATURAL ENVIRONMENT TEACHING (NET) IDEA

This month's NET involves making necklaces and chains with pasta. Get some penne pasta from your local grocery shop and then you can use this in this great arts and craft activity. Paint individual pieces of pasta with a variety of colours, and then when they dry, thread them on to string or wool to make a necklace or chain. This activity allows opportunities for you learner to request the resources they need e.g., paintbrush, palette, etc., or paint they want, e.g., red, blue, etc. (mand 1M-5M). You can also encourage requests for actions including, pour, help, paint, hold, thread, etc. (mand 7M). This activity also encourages many independent play skills (IP\* 8c) and creativity (IP\* 8M). You could also have some pre-painted pasta and work on sorting (VP-MTS† 7M), copying specific designs or sequences (†VP-MTS 11M 13M), i.e., red, blue, red, blue (maths 15b).

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.

\* IP = Independent Play.

† VP-MTS Visual Perceptual skills and Matching-to-sample.



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## PEOPLE WHO INSPIRE US

Russ Harris is a well-regarded expert in Acceptance and Commitment Therapy (ACT). He lives with his family in Australia. Russ Harris originally worked as a doctor in General Practice (GP). He became interested in helping people with their mental health. This led him to discover ACT, and he now works as a therapist and as a coach. Harris has also authored a number of books including '[The Happiness Trap](#)', '[ACT made simple](#)', and '[The Reality Slap](#)'. Russ Harris has also lead many workshops internationally. If you want to learn more about Russ Harris, you can visit his [website](#).

## EVENTS

Daisy Chain Educational Services Ltd are holding a variety of training courses in Whiteley, Hampshire. The courses are entitled, Autism and coping with problem behaviour (1st December 2018), Autism Specific Teaching—Intensive Teaching and Natural Environment Teaching (13th April) and Promoting communication for non-vocal students (3rd August 2019). The courses cost £150 each, per person, but you can use a early booking discount code AUTISM2018, for a 20% discount. [Email Daisy Chain](#) directly to book your place, or telephone them on 07813932363.

HeadStart Speech & Behaviour Clinic have announced their course in Peak ABA (level 1) and/or AIM. These will be presented by Dr Mark Dixon and Dr Adam Hahs, in London on the 17th-18th September 2018 (PEAK, costs £340) and the 19th September (AIM, costs £175). For all dates it costs £500 to attend. To book your place, visit the [website](#).

If you want to study at home, you can get your Continuing Education Units from Behavioral Science in the 21st Century (bSc21). Check out their [ABA Outside the Box page](#) to find out about the selection of online courses. These are great for developing your understanding of ABA

## TERMINOLOGY

**Incidental Teaching** involves using motivating learning opportunities as they arise to teach and generalise skills. This means using opportunities to discuss colours, shapes, numbers, etc. while playing different games, or while out and about! For instance, labelling a dog when you're out and incorporating an intraverbal "dog says....?", counting out bath toys as you put them in the bath, or finding numbers in the supermarket aisles.

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

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