

Report to the Ministry of Health

Feedback to MOH re Emerging Trends in National & International Literature

Report No. 15 covering 1st July 2017 to 31st December 2017

ABACUS Counselling Training & Supervision Ltd

Literature	Findings	Comment
<p>A systematic review of treatments for problem gambling (Dec 2017) Authors: Petry N, Ginley M, Rash C Psychol Addict Behav, 8, 951-961 doi:10.1037/adb0000290. Epub 2017 Jun 22</p>	<ul style="list-style-type: none"> • The authors noted that there had been a substantial increase in published research over recent years and in this review focussed upon 21 randomised trials for treatment of gambling harm • Eleven trials involved more than one session face to face using cognitive behavioural (CBT) therapies, cognitive therapies, and motivational interviewing (MI) therapies (alone or with CBT) • Ten trials involved therapies of one session or non face to face therapy. These sessions involved workbooks and CBT exercises, and sometimes combined with MI, followed by brief feedback or advice. • The authors noted that most studies found there were some benefits of CBT (alone or with MI) and brief feedback/advice in the short term when compared with controls, few showed long-term benefits • The authors noted that controls were often waitlists, and that by so doing there was little possibility of understanding whether the interventions had any long-term improvements. In addition there were a lack of 	<ul style="list-style-type: none"> • Review of well designed studies on therapy can provide evidence for best practice interventions. • However this study demonstrates the difficulty in comparing outcomes when variables across studies fluctuate in important factors, such as treatment group definitions, measures of outcome, and control groups. • In this review, the relatively small sample (N=21) with such variables compounded difficulties in reaching conclusions about best intervention approaches • As more studies become available, and as a greater focus develops outside of severe gambling harm which impacts upon greater numbers in general populations, the use of more aligned outcome measures with raise the value

	<p>standardised outcome measures which further clouded long term effects</p> <ul style="list-style-type: none"> • Other confounding issues were variations in the experimental populations, ranging from subjects that screened positive for gambling problems but had not sought treatment, to others with severe gambling disorder or simply experiencing problems from their gambling. The commented that it was likely that these different populations within a gambling harm paradigm may require different clinical interventions. • The authors posited that those experiencing lower gambling harm symptoms may benefit from very minimal interventions; whereas those with more severe pathology may require at least some therapist face to face (or other) contact • The authors also concluded that contact with therapists appeared to result in more improved outcomes when compared with entirely self-directed interventions • The authors concluded that as availability of research grows for treatment for gambling harm, and particularly as treatment services expand, such reviews are important and timely for best practice. 	<p>of these reviews</p> <ul style="list-style-type: none"> • An important observation is the growing availabilities of briefer interventions that can act to engage earlier those experiencing gambling harm through accessibility, overcoming stigma, and being more cost effective than face to face therapy.
<p>Identifying the relationship between mental health symptoms, problem behaviors and gambling among adolescents. July 2017 Authors: Richard J & Derevensky J</p>	<ul style="list-style-type: none"> • The authors noted adolescence is a time for experimentation and risk taking as well as psychological development • This study examined the relationship between mental health symptoms, such as anxiety and depression, problem behaviours, such as aggression, delinquency, and gambling amongst junior and senior high school (ages 10-19 years) students (US). N=6,818 students were surveyed and results analysed 	<ul style="list-style-type: none"> • This research highlights the higher risk for gambling problems through early age accessing of gambling opportunities, as well as mental health indicators for higher risk • Although excessive gambling can become problematic, the relationship between this and problem gambling was not addressed as this was a cross-

Ann Behav Sci 3(2),
30
doi: 10.21767/2471-
7975.100030

- Although adults gamble more frequently than adolescents gambling problems with adolescents have been estimated to be two to four times that of adults (3-8% problem gambling, while 10-14% of adolescents that gamble were at risk for problem gambling later in life
- The authors noted increased risk for adolescents through growing autonomy, social acceptance of gambling, online gambling, and new increased accessibility for gambling, with average age of first gambling younger than tobacco, alcohol or drug use (Petit, Lejoyeux, 2015), and more rapid progress from social to problem gambling (Derevensky et al 2004).
- Male adolescents have higher risk and AOD use, while female adolescents are associated more with depression and avoidance coping styles. Gambling can become a maladaptive coping mechanism to escape from stressful life events
- Failure to identify these maladaptive coping mechanisms in early life can lead to severe psychiatric problems later
- Overall aggression and anxiety, depression and antisocial symptoms increased likelihood of both male and female adolescents being at-risk for gambling problems as well as gambling frequency
- Mental health problems and problematic behaviours were also increased risk factors for adolescents in 13-15 yr and 16-19 yr cohorts. Severe depression and aggression were increased risk factors for gambling problems and gambling frequency for 10-12 yr olds
- It was noted that males with gambling problems often externalised their response to problems (eg aggression) while females internalised (eg depression, avoidance),

- sectional rather than longitudinal study
- Of concern may be the higher risk for excessive gambling through exposure to the younger adolescents, especially those displaying aggression, a common condition for young. The high relationship between early mental health symptoms and excessive gambling is a concern
 - Gaming and the introduction of gambling aspects to what are often aggressive scenarios may also be a concern. Although such risk taking may not be clearly meeting all the aspects of gambling, there is a growing concern (not addressed in this study) that it is becoming commonplace to introduce opportunities to benefit through payment of money with an uncertain outcome.
 - The ability to raise awareness of risk around mental health and gambling harm may require inclusion of these life-skills within what is already a very busy curriculum at school. This research provides some evidence towards the need to prioritising this need.

and that these responses also increased when at the level of at-risk for gambling problems

- Female adolescents were found to be more frequent gamblers often without progressing to problems and it was posited that females with severe mental health problems and social problems are gambling to avoid these symptoms
- It was noted that mental health symptoms and problem behaviours increased with age independent of gambling and it was posited that early gambling behaviours may exacerbate mental health symptoms and problem behaviours with these problems being maintained over time. High delinquent problems amongst 10-12 year olds were 9.2 times more likely to be frequent gamblers. High aggressive problems found females to be 5 times more likely to be frequent gamblers and males 3.6 times more likely.
- The highest likelihood for being at risk for gambling problems and/or being a frequent gambler was the presence of delinquent or antisocial behaviour (including breaking laws, truancy, and lying), and this was for both males and females
- Severe aggression was the highest predictor of frequent gambling (6.4 times) for youngest (10-12 yr old), and it was concluded that a combination of impulsivity, social pressure and environmental influences may substantially increase risk of frequent gambling among 10-12 yr olds whereas older adolescents may be more resistant to these pressures.
- The authors emphasised the need for attention where there is increased accessibility to gambling for young

	people	
<p>Adverse childhood experiences and disordered gambling: assessing the mediating role of emotional dysregulation; 2017 Authors: Poole J, Kim H, Dobson K, Hodgins D. J Gambling Studies, 2017, 33(4), 1187-1200</p>	<ul style="list-style-type: none"> • The authors noted that adverse childhood experiences (ACEs) such as sexual and physical abuse have been identified as risk factors for problem gambling (PG), even although the mechanism for this risk is largely unknown • The authors sought to identify whether or not emotional dysregulation mediated (explained, influenced, caused or removed) the relationship between the PG and ACEs, and investigated 10 types of ACEs for this purpose • N=414 community gamblers completed measures of ACEs, emotional dysregulation and gambling severity and found all but one (physical abuse) produced a significant association between PG and ACEs. • Those participants that had experienced three or more types of ACE were more than three times likely to be identified as PG when compared with those with not ACE history. • Emotional dysregulation was found to mediate the relationship between ACEs and PG, and the authors concluded that there was a causal link between the two, and that addressing both emotional dysregulation and ACEs should be a focus in the treatment of PG. 	<ul style="list-style-type: none"> • Emotional dysregulation can result in both physical and emotional problems, and regulations of emotions may be necessary to develop through youth and adolescent stages of life successfully (Macklem 2008). Common examples of disorders that example such emotional dysregulation are Borderline Personality Disorder (BPD) and Attention Deficit/Hyperactivity Disorder (ADHD), both commonly co-occurring with PG (Poole et al 2017). • Screening for abuse, violence and anger issues may assist in the provision of appropriate treatment when addressing problem gambling issues, especially as addressing the emotional dysregulation appeared to strongly influence the continued PG behaviour (through mediation of the ACE and PG). • The use of the HITS and CHAT may provide validated tools for this purpose.
<p>Neural substrates of cue reactivity and craving in gambling disorder: 2017 Authors: Limbrick-Oldfield E, Mick I, Cocks R McGonigle J</p>	<ul style="list-style-type: none"> • The authors noted that cue reaction is an accepted measure of the subjective experience and brain effects in addiction • N=19 subjects diagnosed with gambling disorder and n=19 controls were exposed to gambling and appetitive eating cues (2-3 hrs after a meal) and results from fMRI scans were compared 	<ul style="list-style-type: none"> • This research raises the importance of neurological research with the assistance of real time effects possible to enhance neurological approaches in problem gambling interventions. • The lack of correlation between the PGSI a a measure of gambling severity

et al
Translational
Psychiatry 7, e992
(2017) doi:
10.1038/tp.2016.256

- Brain activity following cues, connectivity changes, and craving ratings were compared
- Parts of the brain activity varied between the gamblers and controls particularly in the left insula and the anterior cingulate cortex, with gamblers showing greater reactivity than controls to the gambling cues, but no differences to food cues
- Gamblers' craving increased in the bilateral insula and ventral striatum, but reduced with functional connections between the ventral striatum and medial prefrontal cortex. The gambling cues presented to gamblers resulted in increased brain responses in their reward circuits (but not food cues) when compared with controls.
- The authors noted that neurological studies showed that strokes affecting the insula can disrupt nicotine addiction as well as susceptibility to gambling related cognitive distortions (Clark L, Studer B, Bruss J 2014). Increased insula activity has also been found for AOD disorders (Yalachkov Y, Kaiser J, Naumer MJ, 2012).
- Significant increases in functional connectivity between the nucleus accumbens and insula with gamblers, while lower connectivity between the nucleus accumbens and the prefrontal cortex (PFC; this latter effect with the PFC has been found to be similar to cocaine use disorders).
- Reduced control by the PFC over the limbic system has been found to give rise to disinhibited impulsive behaviour, a premise of addiction models (Goldstein RZ, Volkow ND. 2012) and this study supports this hypothesis
- Craving caused by the gambling cues reduced as the length of abstinence from gambling by the gamblers

and this research may raise some concern, although the explanation that the PGSI identifies level of harm rather than physical severity suggests further discussion is warranted

- This support for the increased sensitisation of gambling cues rather than a competing reward deficiency model of addiction (biological understimulation requiring increased stimulation to normalise) is a useful source of evidence that may assist with identifying appropriate interventions.

which supported previous research (Tavares H, Zilberman ML, Hodgins DC 2005), and that this reduced effect may vary with AOD.

- The authors noted what they thought to be an important finding that severity of gambling as measured by the PGSI did not predict craving or brain activity; they raised a possible explanation that their measurements of craving and changes through abstinence reflect the gamblers' current clinical state, whereas the PGSI score 'emphasises gambling harms (primarily financial consequences) across the last 12 months'.
- Strong whole brain activations occurred across subcortical, limbic and cortical networks for gamblers when gambling cues were presented, with specific increases in the anterior cingulate and insula
- The authors concluded that gamblers' were incentivised for gambling cues and that this followed the incentive sensitisation theory of addiction
- The findings supported pathways with AOD, craving and self-control deficits. The findings also supported the powerful effects of cues (eg EGM cues such as lights, sounds) in triggering cravings for gamblers to gamble even after time elapse.
- The authors concluded that insula activity varied alongside that of gambling craving intensity, and that this knowledge may in future be an important focus of interventions for problem gambling behaviour (eg reduction in the insula activity being trialled with nicotine addiction; (Dinur-Klein et al 2014). Also the importance of controlling gamblers' responses to cues is crucial to avoidance of relapse, and ability to reduce the

	<p>influence of cues upon the insula. Naltrexone may change (reduce) these urges, as an example.</p>	
<p>Treating problem gambling samples with cognitive behavioural therapy and mindfulness interventions: a clinical trial; Dec 2016 Authors: McIntosh C, Crino R, O'Neil K J Gambling Studies, 2016 Dec; 32(4), 1305-1325</p>	<ul style="list-style-type: none"> • The authors noted that mindfulness-based interventions may be effective for interventions with gambling harm • The study compared three interventions: CBT, manualised CBT and mindfulness-based treatment (MBT) • All three interventions identified strong effects following seven sessions at post treatment, 3 months and 6 month follow-up, with all rated as acceptable by participants • Mindfulness and the other interventions were effective in reducing PG behaviours and associated distress. • The CBT and MBT also generalised improvements to quality of life/mental health functioning more effectively than manualised CBT • The authors concluded that a brief mindfulness intervention may be a useful supplement to CBT treatment to reduce rumination and thought suppression 	<ul style="list-style-type: none"> • Mindfulness has become a topic of interest in the treatment of problem gambling and other addictions. In the WAGER (vol 22(5) A mindfulness-based approach to problem gambling treatment) cited Dr Witkiewitz's editorial for the allied forum, the BASIS, a review was discussed of mindfulness-based treatment for addiction in the last decade or so, and its focus upon non-judgmental awareness of feelings, thoughts and present surroundings. In the current study, the most effective outcomes were with a combination of CBT and mindfulness, with CBT treatment followed by mindfulness. • Because rumination and thought suppression are common symptoms in PG there is positive support for the inclusion of MBT in treatment. In addition, rumination can be a symptom of depression or lead to depression, while thought suppression is recognised as a dysfunctional strategy used in gambling to avoid dysphoria but is counter-productive to recovery. It is also a dysfunctional strategy to address anxiety, with both depression and anxiety commonly coexisting with PG.

		<ul style="list-style-type: none"> • Because MBT addresses rumination and avoidance of negative thoughts (rather than addressing the issues), MBT appears to be suited to PG treatment. This study supports such a process, and although MBT may be insufficient to address all issues in PG (eg skills development, socialisation), its delivery combination or inclusion with other interventions such as CBT appears to be supported.
<p>An investigation of the association between shame and problem gambling: the mediating role of maladaptive coping strategies; 2017 Authors: Schlagintweit H, Thompson K, Goldstein A, Stewart S J Gambling Studies 33(4), 1067-1079</p>	<ul style="list-style-type: none"> • The authors noted that shame showed a strong positive correlation with problem gambling. Although guilt and shame were often considered to be similar, guilt did not have the same correlation with problem gambling (PG). They noted that the mechanisms that underly the association of shame and PG were relatively unknown. • The authors further noted that people apply distinct behaviours to cope with feelings of shame and guilt which were poorly adaptive (maladaptive), usually addressing feelings of shame through avoiding or escaping processes, while often appropriately adapting to feelings of guilt through the taking of corrective actions. • The aim of the research was to ascertain if the maladaptive coping motive for the person gambling mediated (explained, affected) the relationship between shame, but not guilt, and the gambling problem. • N=196 PGs completed a PGSI and Gambling Motives Questionnaire to identify their motives for gambling, and whether these motives were for coping, enhancement of their life, or for social reasons. 	<ul style="list-style-type: none"> • Shame and guilt are often used interchangeably. However although they often coexist in that they may be caused by the same event, shame refers to emotions around how we feel about ourselves (caused by ourselves or others), while guilt is focussed upon some action we have done that have caused some injury to others (whether real or imagined) and the awareness/regret or remorse that we hold about that. For example, one may feel guilty that when they were a child that they told a lie that caused someone else to be blamed for some behaviour, but also feel ashamed that were not brave enough to take the blame and they were therefore a coward. • This research focusses upon shame that can arise in a person's life that

	<ul style="list-style-type: none"> • The findings were that coping motives for gambling fully mediated the relationship between shame and PG severity (gambling removed the shame temporarily), but did not mediate the association between guilt and PG severity • The authors concluded that experiencing of shame contributes to PG because of the person gambling as a maladaptive way to cope with the negative effects of shame • They further concluded that treatment to develop more adaptive strategies to cope with a person's shame could be an effective intervention in both preventing and treating PG. 	<p>increases the risk that if they participate in gambling, the gambling may become problematic when the person experiences that ruminating thoughts of shame (or even strong negative schemas that the shame has caused or contributed to) disappear when gambling which can lead to excessive gambling and problems.</p> <ul style="list-style-type: none"> • PG can of course result in further shame of itself (lying, stealing) as well as guilt, or the shame may pre-exist the PG. • This research suggests that the ability for gambling to temporarily remove the shame may be strongly reinforcing, even though the person may continue to lose money. This is further evidence of the importance of addressing wider issues than money loss in therapy, as hidden reinforcers if unaddressed may result in relapse or disengagement from treatment. • This knowledge of the different impact of guilt from shame enables therapy approaches to accurately address this driver of PG.
--	---	--