Chapter 4
Cognitive Behavioural Therapy for Problem Gambling

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It is of course a mistake to assume that once the error in someone's thinking has been pointed out, that is an end to the matter. Helpful responses to automatic thoughts need to be individually tailored, carefully crafted and vividly, imaginatively and frequently rehearsed.

Clients May Not Initially Be Able to Report Their Thoughts

Clients may not be fully aware of the thoughts that occur before they gamble. Habitual smokers or coffee drinkers find themselves pouring another cup or lighting up outside of their conscious awareness. In the same way, the decision to gamble in response to certain triggers may be so well rehearsed that it has become automatic and is below the threshold of awareness (Andrade et al. 2012; Breslin et al. 2002; Kavanagh et al. 2004). When use of a substance is habitual, it is only when such automatic responses are inhibited for some reason (e.g. a decision to abstain or cut down) that the automatic thoughts may intrude into awareness.

Furthermore, gambling is often an attempt to block out awareness of thoughts and worries. Gamblers are often seeking an escape into "the zone" as much as, or at least in addition to, the hope of a win (Schull 2012). It is difficult to provide a detailed account of the thoughts one had during the period one was trying not to be aware of those thoughts.

Finally, many researchers have been struck by the dramatic difference in awareness of gambling thoughts while gambling versus recalling an episode of gambling

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(Ladouceur and Walker 1996). Ladouceur and Walker observed that "before and after the game, subjects report that it is a game of chance. Nothing they can do will influence the outcome. During the game, subjects say many things about the game which suggest that the outcome is predictable and can be influenced. It is as if there are two modes of thinking about the game: spontaneous, uncensored reactions to the events in the game while the game is in progress, and rational consideration of the realities of the game when not involved" (page 103).

Increasing Awareness of Automatic Gambling Thoughts

Early in treatment, cognitive therapists educate clients about the cognitive model, explaining that thoughts influence emotions and behaviour. It is vital that clients feel that they will not be judged for the thoughts they report. They may be reluctant to report their thoughts if they don't understand that what is being asked is merely a sample of the stream of ongoing mental chatter they had prior to gambling and they are not being asked about thoughts they endorse after some consideration. Therapists should encourage a non-judgemental approach to the content of clients' thoughts (see the Metacognitive and Mindfulness chapter in this book). Education about how the mind works (e.g. heuristics and illusions) is helpful (see the Psychoeducation chapter of this book).

Toneatto (2002) notes that gambling choices reveal gambling beliefs. He provides a guide for what therapists should listen for when asking about gambling decisions. For example, when asking how the gambler explains wins and losses, listen for attributions of skill when explaining wins and of bad luck or random events when explaining losses. When asking how they decide when to gamble, listen for gut feelings, instinct or intuition.

Often asking the problem gambling client what they think or believe in general terms is less productive than asking them to describe in detail their most recent session of gambling. Ladouceur et al. (2002) describe such an assessment. They suggest keeping an ear out for cognitive distortions but initially refraining from any education which may serve to interrupt the exploration process. The tone is non-judgemental, like the tone used in motivational interviewing (see the Motivational Interviewing chapter in this book).

Ongoing self-monitoring helps clients become more aware of the extent of their gambling in terms of both money and time spent. Monitoring also helps problem gambling clients become more aware of the triggers for gambling thoughts, their responses to gambling thoughts, the duration and intensity of urges and their responses to these. Monitoring also exposes a memory bias of forgetting steady losses. Variations of monitoring forms are provided by most treatment manuals (Blaszczynksi 1998; Ladouceur et al. 2002, Ladouceur and Lachance 2007; Petry 2005; Raylu and Oei 2010.)

Clients' gambling thoughts can be so telescoped or fleeting that they may not even recognise them as present let alone be able to challenge them. They may, for

example, hear themselves think "just go" or "forget this" and only on retrospective analysis realise that these thoughts reflect being sick of an internal debate about whether to gamble or not. It is essential therefore to try to catch the exact thought phrase or so-called "hot cognition" rather than thoughts about thoughts.

Labelling the Type of Gambling Thought

Therapists should consider the thoughts that precede a gambling session, occur during a gambling session and follow the gambling session. All three time frames serve to maintain the problem, although it is possible that only those thoughts before and after gambling can be reliably altered through CBT (see below).

Beck et al. (1993) outline three types of addictive beliefs that occur before the decision to use drugs – anticipatory beliefs (positive expectation of some rewarding feeling), relief-oriented beliefs (using will remove an uncomfortable state) and facilitative or permissive beliefs or rationalisations justifying drug use.

In addition to these addictive beliefs, there are gambling-specific superstitions and misunderstandings of probability. Goodie and Fortune (2013) lament that while there is broad agreement that cognitive distortions are involved in pathological gambling, there is no authoritative catalogue of gambling distortions. Toneatto (2002) suggests that ultimately these appear to be related to a core belief or assumption that gambling outcomes can either be influenced (if randomly generated, such as lottery numbers) or predicted (if some, but insufficient, information is available to the gambler, as in horse races or card games). Ejova et al. (2015) conducted a factor analysis and suggest that most erroneous beliefs about gambling fall into two forms of the illusion of control (one a form of gamblers' fallacy, the other a complex set of beliefs about luck and fate).

As noted above, these thoughts don't need to be consistently believed. In the context of an urge to gamble, these thoughts need function only to get the gambler to start gambling. Furthermore, many of these thoughts are believed with conviction only during an urge or during gambling (Sevigny and Ladouceur 2003). Nonetheless, labelling the types of gambling thoughts can help clients step back and see through them. Various authors have provided lists of the types of thoughts that encourage gambling (Griffiths 1994; Ladouceur et al. 2002; Ladouceur and Lachance 2007; Milton 2001; Toneatto 2002; Raylu and Oei 2010).

Tone Is Important When Challenging Gambling Thoughts

Clients may have previously tried to talk themselves out of gambling by internally giving voice to the shame, guilt, remorse and even stupidity that they have felt after losing. This strategy can backfire as it increases the desire to escape, thus intensifying the urge (Kavanagh et al. 2004). Sometimes gambling is an expression of

rebellion; certainly it is often advertised as a devil-may-care risk-taking venture. An inner dialogue that is punitive and disapproving only increases the desire to rebel, ironically rebelling against the inner voice that seeks freedom from an addictive slavery.

Self-compassion increases clients' capacity to self-regulate and make difficult changes (Neff 2012; Gilbert 2010). Self-compassion has been linked to reduced rumination, reduced thought suppression, reduced anxiety and reduced depression (Neff 2012). These states of mind have been directly linked to problem gambling (see the Metacognitive and Mindfulness chapter in this book). Gilbert (2010) draws a clear distinction between two approaches to self-correction. One he calls shame-based self-attacking and the other he calls compassionate self-correction. Shame-based self-attacking focuses on the desire to condemn and punish and is given with anger, frustration and contempt. Shame-based self-attacking focuses on a global sense of self, lowers mood and increases the chances of avoidance and escape into destructive behaviours. In contrast, compassionate self-correction focuses on the desire to improve, is given with encouragement and support and increases the chances of engaging in constructive behaviours. Clients are often reluctant to adopt a self-compassionate tone with themselves. They seem to believe that abusive yelling at themselves is not only deserving; it will be effective – even if it has not worked thus far. This view of how to change can perpetuate problem gambling and needs to be addressed. Adding self-loathing when one is dealing with an urge does not energise one to ride out the urge.

Sometimes the desire to go gambling has become a proxy for a legitimate goal which has been hijacked by a gambling habit. Clients may have genuine reasons for not wanting to go home after work; they may have fantasies of reparation ("one last win and I'll pay everyone back and then I'll stop"); they may be lonely and want the apparent company of a venue; they may wish to escape their worries, memories or grief; or they may be bored. The consequence of gambling in response to stress is that eventually all sorts of triggers become linked to a desire to escape through gambling. That is, the triggers generalise, and everything becomes a reason to gamble. Some gamblers like solving puzzles and don't like to give up. In almost any other context, say, the pursuit of knowledge rather than gambling, such persistence would be admirable even if quixotic. Acknowledging the possibility that legitimate unmet needs underlie some gambling urges helps the client frame their inner dialogue in a self-compassionate way and come up with constructive alternatives.

Delfabbro (2004) has excellent advice on how to present counter arguments to gamblers. In an article titled "The Stubborn Logic of Regular Gamblers" he suggests that insisting on challenging gamblers' beliefs can make them feel resentful or foolish. Rather one could acknowledge that they are not necessarily more irrational than anyone else in society, but they are applying heuristics in an inappropriate environment.

By modelling compassionate curiosity during the session rather than impatience or incredulity, the therapist is a model for how the client is to respond to their own thoughts.

Challenges to Urge Thoughts Require a Higher Standard of Evidence than Urge Thoughts

Urge thoughts need only get the client to start gambling. They are overlearned, occur automatically, offer the hope of a win and, regardless of a win, promise excitement and escape. In contrast, the thoughts that keep a client from gambling may be prosaic, do not promise immediate gratification, offer no chance of an immediate win and may not spring to mind convincingly when needed.

The responses to gambling thoughts therefore need to be prepared, well-rehearsed, linked to personally meaningful goals, and vividly memorable to be available for the client to bring them to mind during an urge. Gambling thoughts often have a veneer of reason – e.g. "it's my money" or "I've won before". To argue with the literal content of these thoughts during an urge is to miss the point – which is why such thoughts are such effective facilitating thoughts. During the internal urge debate, the client needs to have already prepared arguments for not gambling that are constructive, self-compassionate, emotional and personally relevant (Harris et al. 2016). They would also benefit from including some short-term advantage to not gambling such as avoiding an argument (Kavanagh et al. 2004). These counter thoughts also need to be hard to discount or ignore, hence accurate. Responses such as "I never win" or "I won't win" don't work because they fly in the face of what the gambler has experienced and logic as it is the nature of gambling that one does not know when the next win might occur.

Gamblers often have a temporal amnesia about their gambling expenditure. When caught up in an urge, they frequently reset their expenditure clock to zero while vividly remembering previous wins. This perpetual resetting of the balance sheet makes gambling more appealing by taking it out of its true financial context. One response to this is for gamblers to remind themselves of the running cumulative tally of expenditure versus wins, perhaps by keeping a card with the ratio written on it in their wallet, purse or mobile phone (Allcock 1994 cited in Ladouceur and Walker 1996).

Making Probabilities More Vivid

This recommendation was made by the Australian Productivity Commission (1999). In a section titled "Communicating the Price of Gambling", they suggested that more evocative ways of representing odds could be used. For example, based on the manufacturers' specifications of a then popular game, to have just a 50% chance of the jackpot, it would take 6.7 million button presses or 392 days of continuous play (24 h per day) or cost nearly $33,000. Another way of communicating the cost might be the cost per hour of various bet choices although this may vary too much to be meaningful – e.g. the Responsible Gambling Guide (2013) from the Victorian Responsible Gambling Foundation notes that for a one dollar per single line bet you

can expect to lose over $218 per hour. The concept of an amount of money is familiar and vivid; we can think of what could be purchased such as clothing, a car, a holiday, etc. The concept of odds however is less intuitive and less familiar. The Australian Gaming Machine Manufacturers Association publishes a Player Information Booklet (Australian Gaming Machine Manufacturers Association, undated). This booklet provides the example that the chance of the top prize in some gaming machines is 1 in 9,765,625. This fact can be easily passed over. However, if a gambler is slowly taken through an imaginary exercise of imagining everyone in Sydney, "Have you been to Sydney, imagine everyone in Richmond, Penrith, Bondi (suburbs of Sydney), can you picture all those people? Now imagine everyone in Melbourne, everyone in Brunswick, everyone on Collins Street… Now imagine everyone in Canberra… Now imagine a birds' eye view of all those people and now choose just one of those people". This gives a better sense of the odds of 1 in 9 million.

Thoughts After a Gambling Session Can Maintain the Problem

To an outsider, one of the more striking things about problem gambling is how persistently hope triumphs over experience. It seems akin to the panic sufferer who despite having survived hundreds if not thousands of panic attacks, still believes that the next panic attack could be the one that kills them. In the case of panic, subtle safety behaviours lead the sufferer to conclude that they would have died if not for the safety behaviour, so each panic is interpreted as a "close shave" rather than evidence of the inherent harmlessness of panic. In the case of gambling, some types of thoughts serve a similar maintaining function.

Biased evaluations of outcome: A double standard of attributions for wins and losses maintains whatever illusions of skill or influence that the gambler has (Toneatto 2002; Ladouceur and Walker 1996). Wins are attributed to skill, that is, confirmation of successful prediction or influence, while losses are attributed to bad luck or randomness, that is, discounted or explained way.

Next time I will quit while I am ahead: After losing more than intended, a gambler can look back over a session and see a moment when they would have broken even, or at least not lost so much, if only they had left before they finally did. So rather than learning a lesson of near inevitable loss, they tell themselves that next time they will leave earlier. Most EGM gamblers will have had the experience of either leaving after a big win or at least leaving with a goodly portion of that win, so it seems plausible that they can do so again. Such rare events are unfortunately etched more vividly into memory than the many more times they left with nothing. Large wins impact the SEEKING pathway (Panksepp 1998) differently than do a series of smaller wins. Large wins provide a form of "stop signal" that smaller nibbles or teasers do not. (The SEEKING pathway is discussed in the Psychoeducation

chapter of this book.) Information about the SEEKING pathway and recognising that the timing of any large win is determined by algorithm and also reviewing their own history of being "stuck at a machine" helps problem gamblers come to realise that their capacity to leave is in fact largely determined by chance and not by their own determination or intention. It is natural and normal to lose control over play during session on an EMG (Dickerson and O'Connor 2006). In fact, the machines are designed to maximise the players "time on device (TOD)" (Schull 2012).

"It's only money" and other potentially life-saving maladaptive rationalisations: Sometimes after heavy losses, gamblers remind themselves that it's only money. This type of thinking may prevent them from being overwhelmed with guilt, shame and remorse and might even be an alternative to suicidal thoughts. Pathological gamblers have much higher rates of suicidal thinking, attempted suicide and suicide than the general population (Maccallum and Blaszczynski 2003). But such amelioration of the emotional consequences of gambling can of course contribute to ongoing gambling. Parke et al. (2007) described a wide range of maladaptive positive thinking after losses on slot machines (EGMs). They noted that misguided positive thinking disrupted naturally occurring contingencies that might otherwise prevent excessive gambling (Parke et al. page 51). Similarly, Navas et al. (2016) found that the use of some emotion regulation strategies such as "refocusing on planning" and "putting into perspective" which are generally adaptive in other contexts predicted the severity of gambling problems.

Resolutions: "I feel so bad I know I'll never go gambling again". Sometimes the losses lead to an epiphany "I'll never gamble again!" And for a period, this may be true. When clients enter treatment, their losses are usually more recent than their wins (Toneatto 2002). Such epiphanies and their repeated subsequent abandonment make for harrowing reading in Fyodor Dostoyevsky's *The Gambler* (Dostoyevsky 1966). The author (KO) quizzed many gamblers who expressed such epiphanies to ascertain if there was a way to distinguish between those expressions which did lead to abstinence and those which did not. Eventually what became clear was that there was no difference in the content of these expressions but rather in what subsequent constructive actions the problem gambler took to protect the epiphany.

The Use of Imagery to Inhibit the Elaboration of Desires

According to Elaborated Intrusion Theory (Kavanagh et al. 2005), there are two components to an episode of craving: an initial apparently spontaneous intrusive thought followed by a cycle of elaborated cognition. The thought feels spontaneous, because we have been unaware of the precursor activity, which takes the form of automatic or overlearned associations that do not require conscious control (Andrade et al. 2012). In some problem gamblers, the absence of any money provides a relief from craving as they feel unable to convincingly elaborate on the initial intrusion.

Anyone attempting to abstain in the presence of such an intrusive desire is faced with a seemingly impossible dilemma. Attempts to suppress such thoughts will

usually backfire. Suppression is believed to backfire as it involves monitoring for the thought which increases its salience and availability (Kavanagh et al. 2004). Elaborative processing on the other hand maintains the intrusion. The elaborated intrusion exacerbates the desire, which in turn increases a sense of lack. In someone attempting to abstain, this sense of lack may lead to pessimism or guilt and other negative emotions which have previously been associated with substance use (Kavanagh et al. 2004). A vicious circle indeed!

If neither suppression nor elaboration is fruitful, what strategy can be adopted in response to an intrusive desire? One approach is mindfulness (see the Metacognitive and Mindfulness chapter in this book). Andrade et al. (2012) found that mentally scanning the body works to reduce cravings by shifting attention towards increased awareness of experiences and thoughts other than the unwanted ones (page 19). Interestingly, body scanning is often one of the components of mindfulness training (see the Metacognitive and Mindfulness chapter in this book).

Another approach is proposed by Kavanagh and his colleagues. They cite research showing that attention diversion shows promise. They have shown that sensory (visual, olfactory, aural, tactile, etc.) imagery is a key conscious process in this elaborative processing and that it makes demands on limited attentional and memory resources. They suggest this competition of desires and other tasks for limited working memory resources offers intriguing possibilities for intervention. They have been able to show that effortful visual processing (e.g. forming complex visual imagery such as a tennis game) diminishes craving (Kavanagh et al. 2005). Although this approach has been applied successfully to a range of addictions and to food cravings in dieters, it has not yet been applied specifically to gambling urges. Harvey et al. (2004) noting that thought suppression leads to further intrusions explain how distraction can work to reduce intrusions. They outline behavioural experiments with clients, first showing through the well-known white bear experiment (don't think of a white bear – can I not think of a white bear? – oops I just did!), that thought suppression leads to further intrusions. Secondly showing that if one turns one's attention to a new positive distractor unrelated to the intrusive thoughts, one can learn that one's thoughts are not out of control. Harvey et al. note that ironic process theory suggests that it is better to try and think of a positive thought (an approach goal) than to try and not think of a negative thought (an avoidance goal) (Harvey et al. (2004, page 233)). In this case, distraction becomes a wise metacognitive allocation of attention!

Stott et al. (2010) have another reason to suggest the active generation of alternative visual images or scripts. When clients repeatedly focus on one recurrent script, they forget that other alternatives scripts are as plausible as the one they are ruminating on. Similarly, Longmore and Worrell (2007) argue that therapy should also construct and strengthen helpful representations, rather than just limiting itself to the logico-deductive or rational challenging of unhelpful representations. The act of generating such alternatives allows the client to be more sceptical of their usual ruminative script. This scepticism of the content of one's mind is a process of stepping back from the content of one's thoughts – another component of mindful detachment (see the Metacognitive and Mindfulness chapter in this book).

Use of Guided Imagery in Rehearsal: Imaginal Desensitisation

One particular example of rehearsing guided imagery is imaginal desensitisation. Rather than only intellectualising a reason not to go gambling during the therapy session, the client learns to create and recreate a visceral experience, a rehearsal of an alternative script.

Imaginal desensitisation involves the client imagining a series of prepared scenes while remaining relaxed. One scene creates an urge, and then later scenes have them remembering the aversive consequences and imagining themselves losing interest in gambling and walking away and feeling good. The relaxation is incompatible with the urge to complete the imagined gambling. Imaginal desensitisation has been shown to work with problem gamblers (McConaghy et al. 1991; Dowling et al. 2007; Grant et al. 2009). It has also been effective as home practice (Blaszczynski et al. 2005) and is described in a self-help book (Blaszczynksi 1998). Imaginal desensitisation has several likely effective components. Apart from the original theoretical aim of reducing the arousal associated with urges, it also involves repeatedly mentally associating the urge to gamble with the negative consequences and repeatedly rehearsing an effective response in imagination as well as associating refraining from gambling with feeling good and at ease.

Unanswered Questions About CBT for Problem Gambling

Cognitive distortions are not unique to problem gamblers. Non-gamblers show the same distortions and illusions as gamblers (Petry 2005) although at lower rates (Griffiths 1994; Cunningham et al. 2014) or with less conviction (Ladouceur 2004). Petry (2005) notes that these illusions and distortions are present in all aspects of life that involve making decisions that have uncertain outcomes. Research to date is inconsistent about the direct relationship between these cognitive distortions and the severity of gambling. Some research has found gamblers express reasonable knowledge of mathematical reasoning ability when not actually playing (Lambos and Delfabbro 2007). Other research has found mathematical reasoning is lacking in gamblers even when not playing (Cunningham et al. 2014). Ladouceur and Walker (1996) conclude that cognitive distortions by themselves cannot be regarded as a complete explanation of why people gamble to excess.

Does CBT change problem gamblers' cognitive distortions? Petry (2005) notes that research has not yet demonstrated whether cognitive therapy that focuses on irrational cognitions actually does modify them. Other authors have acknowledged the difficulty of profoundly shifting some distorted gambling cognitions (Delfabbro 2004; Toneatto 2012). Some have questioned whether challenging gambling-related cognitions is the only way to reduce gambling or even gambling-related cognitions (Toneatto and Gunaratne 2009). Even if a gambler's cognitions change outside play, it is uncertain that they change during play. "Faulty cognitions appear inherent in

gambling situations" (Petry 2005, page 212). This is not surprising if we allow that as in evolutionary mismatch theory (Spinella 2003), some gambling distortions are human heuristics elicited and heightened by the act of gambling (see the "Psychoeducation" chapter in this book).

Conclusion

Cognitive distortions are unquestionably at play in problem gambling, and CBT does show some benefit. Rather than focusing exclusively on changing these beliefs or preventing them from ever arising, being able to deal constructively with the ebb and flow of such thoughts may be how problem gamblers cease gambling. This is how a metacognitive stance and mindful detachment are relevant. (See the "Metacognitive and Mindfulness Approaches" chapter in this book.)

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