RESEARCH QUESTIONS
How does tolerance (i.e., need to increase behaviour to gain previous level of excitement) influence the increase of bet size in gambling? What withdrawal symptoms (e.g., restlessness, depression) follow the cessation of gambling behaviour?

PURPOSE
Despite its classification as an addictive disorder, few empirical studies have found support for the presence of tolerance and withdrawal in chronic gambling. The purpose of this study is to gain an understanding of the process of tolerance associated with increasing bet size within sessions and across time and to investigate withdrawal symptoms commonly reported by pathological gamblers following the cessation of gambling behaviour.

HYPOTHESIS
None stated.

PARTICIPANTS
A total of 62 participants (63% male) who met criteria for pathological gambling, alcohol dependence, or both were recruited from treatment centres in Sydney, Australia. The average age was 45 years for gamblers, 41 years for alcohol users, and 40 for the co-morbid (i.e., gambler and alcohol user) sample.

PROCEDURE
Participants completed self-report questionnaires of alcohol consumption/dependence and took part in a semi-structured interview that examined gambling behaviours, treatments, co-morbidity, family history, and withdrawal and tolerance symptoms.

MAIN OUTCOME MEASURES
The Alcohol Use Disorders Identification Test (AUDIT) examined alcohol consumption. The Severity of Alcohol Dependence Questionnaire assessed withdrawal from alcohol and was reworded to assess gambling withdrawal. The Alcohol Use Disorders Diagnostic Schedule examined alcohol withdrawal and tolerance and was modified to assess gambling withdrawal and tolerance. The South Oaks Gambling Scale assessed lifetime problem gambling.

KEY RESULTS
Tolerance. The majority of gamblers (71%) and individuals in the co-morbid group (583%) reported that they needed to gamble with increasing amounts of money to feel desired levels of excitement. At least half of the participants in all groups reported that they need to gamble or consume more alcohol in order to achieve the same effect. When asked why they increased their bet sizes 2/3 to 3/4 of gambling and co-morbid participants reported that they did so to increase their chance for a bigger win or to change their luck rather than for excitement. Withdrawal. About 2/3 of gambling and co-morbid participants reported experiencing restlessness and irritability after ceasing gambling. Gamblers tended to feel more depressed, discomfort, restlessness and agitation than the alcohol group. The co-morbid group’s withdrawal symptoms tended to be similar to the alcohol only group. Overall, between 1/5 to 3/4 of gamblers and alcohol users reported experience at least one withdrawal symptom.

LIMITATIONS
The use of self-report surveys might result in bias. A small convenience sample was used.

CONCLUSIONS
The results for tolerance are inconsistent with the addiction model which cites habituation or desensitization to excitement as reasons to increase bet size. Instead these results support a cognitive model where gamblers increase bet size in a mistaken belief that chances of winning will increase over time. However, results seem to support the presence of withdrawal symptoms due to pathological gambling, with gamblers experiencing withdrawal symptoms comparable to those experienced by alcohol users.

KEYWORDS: alcoholism, alcohol dependence, problem gambling, tolerance, withdrawal, comorbidity
URL:
http://www.tandfonline.com/doi/abs/10.1080/14459790802140007