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## **Skin conductance responses of problem and non-problem gamblers to large and small magnitude wins**

### **Abstract**

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# **Skin conductance responses of problem and non-problem gamblers to large and small magnitude wins**

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**Aims:** Theoretical conceptualisations of problem gambling posit that the aberrant behaviours associated with this disorder are due to abnormal incentive processing in affected individuals. Previous autonomic research has suggested problem gamblers are less responsive to the experience of reward during real gambling activity on electronic gaming machines (EGMs) compared to non-problem gamblers; however, it remains unclear whether problem gamblers respond differently to wins of various magnitude. The current study sought to examine the psychophysiological responses of problem gamblers following small and larger magnitude wins in order to determine whether these individuals are more or less sensitive to these outcomes compared to non-problem gamblers. **Method:** Seventeen problem gamblers and eighteen non-problem gamblers played a computer EGM task in a laboratory setting. Skin conductance responses (SCRs) following small and large wins, losses, and near-wins task were recorded and analysed. **Results:** A significant main effect of outcome type showed that larger magnitude wins elicited greater SCRs than small wins across the problem and non-problem gambler groups. While problem gamblers elicited reduced but comparable SCRs to non-problem gamblers to small wins, these individuals demonstrated significantly attenuated SCRs following larger magnitude wins. **Conclusions:** Consistent with previous research, the findings of the current study provide further support for the notion that problem gamblers are hyposensitive to reward, although further research is required to verify these results during genuine gambling activity where real money is returned. Nevertheless, the current study provides valuable information on the psychophysiological responses of problem gamblers using ecologically-valid stimuli, and has important implications for explaining the problematic behaviours associated with this complex disorder.

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**Keywords:** skin conductance response (SCR), Gambling, Electronic Gaming Machine (EGM), problem gambling, reward processing

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