

Gambling, alcohol and gender: Subjective effects and clinical characteristics

Akademisk avhandling

Som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentligen försvaras i Arvid Carlsson, Medicinaregatan 3, Göteborg, fredagen den 22 september 2023, klockan 9:00

av Louise Miller

Fakultetsopponent:
Professor Anne H Berman
Uppsala Universitet, Sverige

Avhandlingen baseras på följande delarbeten

- I. Miller L, Gordh AS.** High Recreational Gamblers Show Increased Stimulatory Effects of an Acute Laboratory Gambling Challenge. *J Gambl Stud.* 2021 Mar;37(1):299-318.
- II. Miller L, Söderpalm Gordh A.** Subjective and Cardiovascular Responses to an Acute Laboratory Gambling Task in Men and Women. *Front Psychiatry.* 2022 Jun 6;13:702298.
- III. Miller L, Mide M, Arvidson E, Söderpalm Gordh A.** Clinical differences between men and women in a Swedish treatment-seeking population with gambling disorder. *Front Psychiatry.* 2023 Jan 4;13:1054236.
- IV. Miller L, Söderpalm Gordh A.** The effects of age and gender on subjective responses to alcohol. *Submitted 2023.*

**SAHLGRENKA AKADEMIN
INSTITUTIONEN FÖR NEUROVETENSKAP OCH
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Abstract

Gambling and alcohol are two recreational activities enjoyed by many people all over the world. Most with the purpose of leisure and social interaction with little or no consequence to impact daily life. For some however these activities can lead to harmful use and addictive tendencies can develop. This thesis explored the subjective effects of gambling within a recreational groups of gamblers, non-gamblers and those who experience a 'high' from the activity, also referred to as 'high gamblers'. The aim was to establish how a healthy population responded when exposed to a gambling challenge. The groups were further split into gender to examine whether any differences were seen between men and women as previous literature has demonstrated a male dominancy. Since there are limited population studies exploring the treatment seeking population for gambling addiction we investigated which demographic groups are seeking treatment. Further we explored the subjective effects of alcohol across different age spans to gain a broader perspective of the effects of alcohol and whether alcohol use disorder was a risk at different ages.

We found that high recreational gamblers reported more stimulative effects of a gambling challenge compared to those who gamble little or not at all (**Paper I**). Further when exploring gender differences, we found that both men and women reported stimulatory effects from the gambling challenge, but no differences in the subjective effects were found between genders. However the men showed an increase in systolic blood pressure compared to women after the gambling challenge (**Paper II**). We also found clinical differences between men and women with gambling disorder. We found that men and women differed in age, living situation, harmful alcohol use, problematic drug use and comorbidity (**Paper III**).

We also explored the subjective effects of alcohol with regards to age and gender and found that both older and younger subjects showed increased stimulatory effects after a moderate dose of alcohol. When looking at gender we found that women showed decreased feelings of tension and anger compared to men (**Paper IV**).

In conclusion, this thesis strengthens the addictive tendencies of slot machine gambling as seen by the higher arousal effects. Gender differences in a stimulatory response of a gambling challenge were not seen which is a unique outcome in comparison to existing literature. However we found gender differences in a patient population. Alcohol use across different age spans showed that men wanted to drink more and that the different subjective effects were seen between gender and age groups. This highlights the risk for alcohol use disorder independent of age.

Keywords Addiction, Alcohol, Gambling, Gender, Subjective effects.

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