



Folkhälsomyndigheten  
PUBLIC HEALTH AGENCY OF SWEDEN

# Gambling and gambling problems in Sweden 2009-2010

Results from a one-year follow-up



# Summary

## Results from a one-year follow-up

Since the end of the 1990s, prevalence studies have become increasingly common. These are studies intended to survey what proportion of a population gambles and what proportion has gambling problems at a certain point in time. In recent years, growing attention has been paid to the need for epidemiological studies with repeated measurements where changes and possible explanations of increases or decreases in gambling problems can be studied. Swelogs is one of the world's first and largest longitudinal epidemiological studies of gambling and health. Similar studies are under way in Australia, Canada and New Zealand.

Swelogs, the Swedish Longitudinal Gambling Study, is a research programme conducted and financed by the Swedish National Institute of Public Health. The overarching goal of the project is to develop knowledge and methods that can prevent gambling problems. The study comprises an epidemiological study and an in depth study with several measurement points each. The main objective of this report is to describe changes with regard to gambling problems in the population over a one-year period and how this co-varies with changes in health.

The results are based on repeated interviews of just over 6,000 people. The interviews were completed during the periods of November 2008 to August 2009 and December 2009 to August 2010. The original sample consisted of a random, but stratified selection of 15,000 people between the ages of 16 and 84 from the Swedish population register. People from groups in which gambling problems are more common and young people were overrepresented in the selection. Just over 8,000 people participated in the first measurement and it was this group that was contacted again for the second measurement. Data was mainly collected through telephone interviews. Those who could not be reached by phone were sent a postal questionnaire with two reminders. Of those who participated in the first measurement, 75 per cent also participated in the second measurement. Among those in the dropout group, there were larger proportions of:

- women
- single individuals, both with and without children
- individuals born outside Sweden
- people from Stockholm, Gothenburg and Malmö
- those with no more than an upper-secondary education
- those who have financial problems
- those with a low socioeconomic status
- those in poor mental health
- daily smokers
- those with risky alcohol use

- those who do not gamble at all
- problem gamblers

The questionnaire included questions about gambling, gambling problems, health, security, social relationships, occupation and the composition and finances of the household. Response data was supplemented with information from Statistics Sweden's register data, including data on education, sources of income and immigration/emigration. The degree of gambling problems was assessed based on the validated measurement instrument, Problem Gambling Severity Index (PGSI). In the analysis, response data was weighted with different calibration weights so that the results reflect the situation in the population at each occasion. The weighting for the 2009/2010 measurement was done in consideration of the value of the following variables in 2008:

- gender
- age
- country of birth
- income
- type of place of residence (urban or not)
- civil status
- employment circumstances
- family type (with or without children)
- level of education
- professional category
- welfare benefits
- received sickness benefits
- unemployment
- industry of occupation

## Proportion of problem gamblers in the population

The proportion of problem gamblers was unchanged, but three-fourths of the previous problem gamblers were replaced with new problem gamblers. Some of the new problem gamblers were individuals who had previously had gambling problems while others were completely new problem gamblers. The combination of an unchanged level of problem gambling but a large turnover among problem gamblers indicates that problem gamblers comprise a significantly larger proportion of the population than the approximately 2 per cent that appears to have gambling problems at a single point in time. The consequences of these problems, such as financial difficulties and relationship problems, are such that they can remain even after the acute problem phase.

## Incidence: Addition of new problem gamblers in one year

Incidence describes the number of occurrences in a certain population during a defined period of time. It is often used to describe the number of new cases of a disease, but it can also concern other symptoms or events. The incidence described concerns the proportion of new problem gamblers according to PGSI in the population in the year that passed between the first (2008/2009) and second (2009/2010) measurements, i.e. those who went from *no problems* or *low risk* to *moderate risk* or *gambling problems*.

In total, approximately 100,000 people in the Swedish population between the ages of 16 and 84 became problem gamblers between the 2008/2009 measurement and the 2009/2010 measurement. They comprise 1.4 per cent of the age groups in question and 1.7 per cent of those who gambled in the first measurement (70 per cent of the population). Just over half of the new problem gamblers were men and more than one-fourth were under the age of 25. The incidence was higher among those born outside Sweden. The level of education did not appear to be of any crucial significance with regard to incidence.

The risk groups with regard to gambling problems were mainly found among adolescents and young adults, but also among the elderly. The situation also differs between men and women. For women, we found the highest proportion of new problem gamblers in the 45-64 year age group.

One-fifth of the new problem gamblers had gambling problems earlier in life. These individuals are almost exclusively men. Compared with the entirely new problem gamblers, those with previous gambling problems gamble more on horses, gambling machines, poker and casino games and in unregulated forms of gambling.

Regardless of gambling habits in the first measurement, the highest incidence was among those who gambled in games with a high risk potential every month of the year that passed between the measurements. The proportion was somewhat lower among those who previously gambled monthly, but in games with a lower risk potential.

Risky drinking habits at the first measurement were a very clear indicator of future problem gambling and occurred mainly among men. We also noted a connection between developing risky drinking habits during the year and increasing gambling problems.

For men, there was a connection between impaired mental health and incidence with higher incidence among those with impaired mental health. Incidence also co-varied with degraded mental health during the year. For women, there was a lower incidence among those with worse general health, and above all among those whose general health worsened during the year.

A sign of increasing gambling problems is gambling for more money or a longer time than first intended and viewing oneself as a gambler. Among those who said

in the first measurement that they did so, the incidence was above 10 per cent. There is also a clear connection between gambling during working hours or school hours and incidence, mainly for those who began gambling at work or school during the year.

Individuals who play video and computer games were at greater risk of incidence even when we controlled for gender and age.

In terms of life events during the year, we found the strongest connection between incidence and the death of a close relative. Likewise, there were clear connections between incidence and a higher number of arguments with a close relative, but these arguments may also be a consequence of more gambling problems.

Severely worsened finances co-vary with an increased risk of gambling problems, but there is also a connection between markedly improved finances and an increased risk of gambling problems. In the same way, there are connections between changed employment circumstances, improved or worsened, where mainly improved employment circumstances co-vary with a higher degree of problem gambling. This, together with the fact that gambling during working hours also co-varies with an elevated risk of becoming a risk gambler, shows that working conditions and changed working conditions highly co-vary with the risk of developing gambling problems.

## Continued problem gambling

Just over 40,000 people were continued problem gamblers between the measurement periods, and nearly half of them had serious gambling problems. Men account for approximately 85 per cent of those who are continued problem gamblers (men were approximately 70 per cent of the problem gamblers in the first measurement).

Those who were continued problem gamblers were found to a higher degree among previous problem gamblers who gamble to forget about everything else for a while, who gamble because it is exciting and who gamble when they should actually be doing something else.

Risky drinking habits at the time of the first measurement led to a lower probability of getting out of problem gambling. Those whose general health worsened during the year were also less likely to move out of problem gambling.

Divorce or separation during the year reduced the likelihood of getting out of problem gambling, as did a higher number of arguments with a close relative.

## The gambling

Overall gambling increased somewhat from 70 to 73 per cent. This is at least partly due to the proportion of minors decreasing in the population studied, but the increase cannot be entirely explained by this. The proportion that gambles increased in nearly all sub-groups. An exception is the group comprising people

born outside Europe, in which gambling decreased. New gamblers generally gamble less than those who continued to gamble during both measurement periods. Gamblers without problems increased and the proportion of gamblers at low risk of gambling problems in the population decreased from 5 to 4 per cent. Differences with regard to gambling participation between new and previous gamblers are the smallest for lotteries, poker, gambling machines and bingo. In other forms of gambling, gambling participation is at least twice as high among the previous gamblers.

Of the study participants, 60 per cent gambled on both measurement occasions. This proportion was 67 per cent among the men and 57 per cent among the women.

The proportion of the population that gambled on sporting events and live-broadcast TV competitions decreased while the proportion that gambled in number games increased. The proportion that gambled online over the Internet was 13 percent at the second measurement. Part of the increase from 9 per cent at the first measurement may be partly due to a change in the method for measuring online gambling.

## Risk potential

In connection with the analyses for this report, we assessed the risk potential for various gambling types. The degree of the risk potential is determined by the speed of each game, the possibility of multigame and multi-stake opportunities, sound and light effects, the possibility of varying the stake, accessibility of the game, how quickly winnings are paid out and the continuity of the game (the possibility to form a gambling session of repeated games). The combination of these different aspects yields the risk potential for each type of gambling.

Games with a low risk potential are those with a long time from the time of the bet to the outcome, but a short total gambling time on each occasion. Lotteries purchased at bookmakers and the Harry Boy horse race game are examples of such games. Games with a medium risk potential have a shorter time from bet to outcome and it is possible to extend the total gambling time to a suite of gambling rounds. The majority of sports betting, gambling on horses and live poker are in this group. Games with a high risk potential are characterised by a short time from bet to outcome, rapid pay-out of winnings, the possibility of long gambling sessions and often special gambling environments with lights and sound. Many types of games that are available on the Internet have a high risk potential, as well as gambling machines and casino games. Around 5 per cent of the population gambles in games with a high risk potential every month.

The degree of problem gambling and incidence clearly co-vary with how often one gambles in games with a higher risk potential.

## Future knowledge from Swelogs

The continued work in Swelogs will lead to better knowledge with regard to risk and protective factors for gambling problems, the actual scope of the problem, factors at a group level and structural level of significance to gambling problems, distinguishing characteristics of people in the risk zone and mobility between different degrees of gambling problems.

---

*The Public Health Agency of Sweden is an expert authority with responsibility for public health issues at a national level. The Agency develops and supports activities to promote health, prevent illness and improve preparedness for health threats.*

*Our vision statement: a public health that strengthens the positive development of society.*



**Folkhälsomyndigheten**  
PUBLIC HEALTH AGENCY OF SWEDEN

**Solna** Nobels väg 18, SE-171 82 Solna **Östersund** Forskarens väg 3, SE-831 40 Östersund.

**[www.folkhalsomyndigheten.se](http://www.folkhalsomyndigheten.se)**