

Longitudinal Cohort Studies

WHAT ARE LONGITUDINAL COHORT STUDIES?

Longitudinal cohort studies are studies that follow and observe a cohort of people over a period of time. A cohort is a group of people who share some characteristics. For example, they might have been exposed to an increase in gambling opportunities due to new policies. Longitudinal studies may last for many years. There are two main types of longitudinal cohort studies. In retrospective studies, researchers use data that have already been gathered. While retrospective studies tend to be less costly, the research may be limited by the kind of data that is available. Prospective studies are planned in advance to observe a cohort over a long period.

WHY ARE THEY IMPORTANT?

Longitudinal studies allow researchers to link the risk factors of a health condition (e.g., gambling) to the consequences over time. There have been prospective cohort studies examining gambling and problem gambling since the 1990s. However, early studies had a number of limitations. Those studies involved a small number of participants, with many dropping out of the study before it ended. They tended to follow the participants over a short period and consider only a subset of possible risk factors. The limitations of early studies led to the launch of a few large-scale longitudinal studies, as described in more detail below.

Notable longitudinal studies in gambling and problem gambling research

The Leisure, Lifestyle, Lifecycle Project (LLLP)

The LLLP was funded by the Alberta Gambling Research Institute and launched in 2006. It began with 1,808 people from Alberta, Canada. Participants belonged to five age cohorts (age 13-15; age 18-20; age 23-25; age 43-45; and age 63-65). There were 524 participants who were at high risk of developing gambling problems. These individuals gambled more

frequently and spent more money on gambling than other people. All participants completed a survey and a face-to-face interview.

There were four follow-up surveys, each occurring at an interval of 19 to 21 months. The final survey was completed by 1,030 adults and 313 adolescents. A final report on the results of the LLLP was published in 2015.

The Quinte Longitudinal Study (QLS)

The QLS was a 5-year study funded by the Ontario Problem Gambling Research Centre and launched in 2006. It began with 4,123 people from the Quinte Region of Ontario, Canada. Participants were between the ages of 17 to 90. There were 1,216 individuals who were at high-risk of developing gambling problems.

The QLS included a baseline survey and four follow-up surveys, with a 12-month interval in between. A high percentage, 93.9% of participants, remained to the end of the study. A report that summarized the results of the QLS and compared these results to the LLLP was published in 2015.

The Swedish Longitudinal Gambling Study (Swelogs)

The Swelogs was funded by the Public Health Agency of Sweden and launched in 2008. It had three parts. The first part was the epidemiological (EP) track, which included four surveys in 2008, 2009/2010, 2012, and 2014. Participants were between 16 to 84 years old and were randomly selected from the Swedish Register of the Total Population. The EP track began with 8,165 people in 2008. A total of 2,847 completed all four surveys.

The second part involved in-depth telephone interviews with people who were identified as being at moderate risk or as having gambling problems from the EP track. Another group of people who were at low risk or did not have a gambling problem were also selected. The two groups were matched on basic

demographic information. The interviews occurred in 2011 with 2400 people, and again in 2013 and 2015.

The final part was a follow-up study of 578 people who participated in a 1997/1998 Swedish gambling prevalence study. Of the 578 participants, there were 289 people with gambling problems. The Swelogs has resulted in several articles that were published in academic journals, as well as reports and fact sheets.

The Victorian Gambling Study (VGS)

The VGS was funded by the Victoria Department of Justice in Australia and launched in 2008. It began with a telephone survey with 15,000 adults. There were three follow-up surveys in 2009, 2010, and 2011. About 24.7% of participants remained to the end of the study. Reports on the results had been published by the Victoria Department of Justice and the Victorian Responsible Gambling Foundation.

The New Zealand National Gambling Study (NZ NGS)

The NZ NGS was funded by the New Zealand Ministry of Health and launched in 2012. It began with 6,251 people aged 18 years and older. The study placed an emphasis on recruiting important ethnic groups of the country, including Maori, Pacific Island, and Asian. The NZ NGS has had four survey periods as of 2018. Reports on each survey are available online.

The Massachusetts Gambling Impact Cohort Study (MAGIC)

The MAGIC study was funded by the Massachusetts Gaming Commission and launched in 2015. It is the first large-scale adult cohort study in the U.S.A. The study began with 3,139 participants. Subsequent surveys were completed in 2016 and 2018.

At least one more survey is planned in 2019. Reports on the results of the 2015 and 2016 surveys are available online.

Common findings across the longitudinal studies

Some findings are consistently observed from the longitudinal studies. First, people's gambling status changes over time. In general, people with no gambling problems tend to remain that way. Less than half of people with gambling problems continue to have gambling problems in the next assessment. Only

a small number of people with gambling problems continue to have problems over multiple assessments.

Secondly, multiple factors are involved to increase the risk of problem gambling. Gambling-related factors appear to be most important in predicting future problem gambling. These factors include being at risk or having gambling problems, gambling frequently, and gambling to escape stress or to distract oneself. Personality is the next most important factor. Having mental health problems, such as depression and substance abuse, also predict problem gambling.

Finally, factors that influence the onset of problem gambling appear to be different from factors that influence the continuation and relapse of problem gambling. Gambling-related factors strongly predict the onset of problem gambling. In contrast, non-gambling factors have a greater role in the continuation and relapse of problem gambling. In particular, the presence of mental health problems and certain personality traits make it more difficult for people to recover from problem gambling.

This is a summary of Longitudinal Cohort Studies described in the *Conceptual Framework of Harmful Gambling*. To learn more about these studies and the Conceptual Framework, please refer to the [full report](#) or visit the [Longitudinal Cohort Studies webpage](#) on the GREO website.