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# **The relationship between growing up in poverty and gambling risk-taking behaviour**

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## **Abstract**

In this paper, the relation between growing up in poverty and gambling behaviour will be examined. To test this relation, a survey experiment was designed and conducted. The study examines the relation between the socioeconomic status of the parents on gambling behaviour, as well as the relation between different types of income during your childhood on gambling behaviour. The findings suggest that the level of education of the parents has a significant influence on gambling behaviour, Though, this influenced diminishes when risk perception was included. Risk perception is proven as a significant factor across all the regressions that were run in the paper, showing the influence it has on shaping gambling behaviour. Moreover, the study finds evidence that receiving government assistance, and in particular unemployment benefits, is significantly related to the gambling behaviour. Adding to this, a difference in gambling behaviour between genders was found by the research. Overall, this paper not only contributes to the current research regarding the relation between poverty and gambling risk-taking behaviour, but it also provides suggestions for policy makers on how they can use the findings for improvements in the prevention and intervention strategies designed to counter the gambling harms.

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# 1 Introduction

In recent years the number of people that have been affected with a gambling addiction has risen rapidly, potentially surpassing the addiction rates which are reported by the industry (Gunstone et al., 2022). This rise can be partially attributed to the normalisation, legalisation, and the proliferation of gambling (Hurt et al., 2008). Gambling addiction, which is also known as pathological gambling, is a disorder that is characterized by problematic gambling behaviour, which is recurrent and persistent, which leads to a disruption in personal, occupational, and social functioning. The addiction is considered a behavioural addiction, as opposed to a substance addiction. The reason for this, is because individuals with gambling addiction do not become physically dependent on a substance (Schulte and Hser, 2013). However, they can experience a psychological dependence on gambling and find it difficult to control their gambling behaviour despite the negative consequences that come with it. Indicators for problematic gambling are gambling by yourself, continuing gambling, having a high loss aversion, and having a high impulsivity score.

## 1.1 Variables

In this research, the dependent variable will be the gambling risk-taking behaviour. Risk behaviour can be defined as the behaviour that emerges when the outcome and benefits of a situation are unknown (Trimpop, 1994). Gambling risk-taking behaviour entails the decisions and actions that individuals take when they are faced with gambling opportunities and the associated potential gains and losses (Riley et al., 2021). This can be either consciously or non-consciously behaviour. Every person acts differently in a situation that incorporates risk. Individuals may engage in risky behaviour, if they believe that the potential benefits outweigh the potential costs. The independent variables in the research that will capture the upbringing in poverty, are the childhood income, and the socioeconomic status of the parents.

## **1.2 Importance of the research**

There are multiple reasons why it is vital to do more research on this topic. Firstly, it is important because gambling addiction can have serious consequences for individuals and their families. The research can provide information, which can improve the understanding of the relation between gambling addiction, poverty, and risk-taking behaviours. As gambling addiction can have serious consequences for individuals and their families, it becomes crucial to get a better understanding of this relation. Secondly, the research can help to identify the vulnerable population, who are more likely to develop a gambling problem. If the impact of the socioeconomic situation is recognised, it can be used to develop more effective prevention and intervention strategies. Gambling addiction is an important area of study for multiple fields. This research could encourage a collaboration between various fields. Professors from fields such as economics, public health, sociology, and psychology could all benefit together from the findings. This could help to develop a comprehensive approach, which could address the varied challenges that occur from gambling addictions.

## **1.3 Literature gaps**

Looking at the previous literature, there has been some research on the relationship between income and gambling behaviour more generally, where most of the studies have focused on the adult income and the impact of that on gambling rather than having focussed on the childhood income. A potential contribution for this research, is that it can show how the childhood income impacts risk-taking behaviour of a person in general, as well as how it has an influence on their attitudes and beliefs concerning gambling. This includes, researching how the socioeconomic status during childhood, can affect the development of risk-taking behaviour and the potential for a gambling addiction later in life.

Another gap which can be filled by this research, is that it researches how the different types of childhood income, can have an impact on gambling behaviour differently. Adding to this, it can be investigated, whether the gambling risk-taking behaviour differentiates between individuals who experienced childhood poverty compared to individuals who grew up in the middle-class or the upper-class. Studying the interaction between gambling risk-taking and the socioeconomic status can provide new insights, which can help to get a better understanding of the complex relation between the factors and the influence that they have on behaviour. Existing research has shown that the status is related to the development of the ability of an adolescent to exercise self-control (Farley & Kim-Spoon, 2017). Zheng & Luo (2009) proved a relation between the socioeconomic status of the family and risk-taking behaviour. They state that criminal behaviour mainly occurred in groups who showed a low level of self-control, which was stated to be significantly related to the socioeconomic status of the family. Their findings implicated that a lower status is related to more risk-taking behaviour. This paper hopes to provide additional support to their findings by researching the relation with the specific gambling risk-taking behaviour, which has not been done yet.

#### **1.4 Research question**

Concluding, the current research does not provide enough findings, which are needed to have a better understanding of the relationship between growing up in poverty and gambling risk-taking behaviour. This understanding could be important, as it can provide implications which are beneficial for public policy and interventions, which seek to reduce the gambling problems and the damages that are associated to it. This paper provides a new insight on a relationship, where there is currently still not enough information about (Raybould et al., 2021). The primary objective of the study is to verify the relationship between gambling risk-behaviour and the situation of an individual in their formative years, and to what extent it influences the behaviour. Secondly, the study tries to show the distinguishment in the way different types of income influence the gambling risk-behaviour among the adults. Thus, the following research question:

*‘What is the relationship between growing up in poverty and gambling risk-taking behaviour, and how do different types of childhood income impact gambling behaviour among adults?’*

To investigate the relation, a survey experiment has been designed. In this experiment, it will be tested if individuals are more risk-taking with gambling when they have had an upbringing in poverty, compared to individuals that had a richer upbringing. The experiment will consist of multiple scenarios, where individuals will have to decide how likely there are to participate in the activity. By carrying out this experiment, the results can give an idea about the gambling risk taken by individuals and the influence of certain variables on gambling behaviour.

In the following chapters, the theoretical background will be presented, which includes a literature review and the hypothesis, followed by the methodology and the results of the research. The last chapter will conclude the paper with a conclusion and discussion section.



## 2 Theoretical background

In this chapter, the following concepts will be discussed: a literature review including gambling, the relationship between gambling and poverty, the socioeconomic status, the childhood income, and the control variables, followed by the formulation of the hypotheses.

### 2.1 Literature review

### 2.2 Gambling

Gambling has been a widely covered subject across multiple disciplines, such as economics, psychology, public health, and sociology. In recent years gambling has become more normalised, which resulted in a higher participation in gambling (McCormack et al., 2014). To respond to the growing gambling participation, the support for a public health approach to act upon the harms, has grown significantly (Victorian Responsible Gambling Foundation, 2017; Elton-Marshall et al., 2017). Various studies have explored the different aspects of risk behaviour in gambling. It is believed that the perception of risk plays a significant role to ascertain the intention and the following behaviour, when individuals face a risky situation (Morgan et al., 2002; Siegrist et al., 2005; Oei and Jardim, 2007; Breakwell, 2007; Ajzen, 2011). The choices that individuals make are based on how they view the meaning, range, and the likelihood of potential outcomes (Weber et al., 2002). Individuals who are perceived as disordered gamblers, overestimate the chances of winning and their own skills (Delfabbro, 2004; Fortune & Goodie, 2011), and use gambling to increase their state of mind or to escape from the reality (Clarke et al., 2007; Shead et al., 2008).

The existing research is mainly focused on the traditional forms of gambling, such as physical casinos, sports betting, and lottery games (Lawn et al., 2020). The emergence of digital gambling platforms has introduced a new domain in the gambling environment. The upcoming of digital gambling can be seen as the main reason of the growth in the gambling market (Guillou-Landreat et al., 2021). The digitalising has led to an increase in gambling from individuals who had not participated in gambling before (Hing, 2014). The current research has not focussed enough on the digital gambling platforms, who have unique characteristics, such as the instant gratification,

accessibility, and anonymity, and give new implications (Diaz & Perez, 2021). As a result, new opportunities, challenges, and potential risks have surfaces, which require analysis to create adequate policies.

Another notion within the problem that is proven by research, is that individuals start with gambling at a younger age. While gambling is forbidden to minors in most countries, data has shown that between 60 and 99 percent of boys, between the age of 12 and 20, have participated in gambling. (Splevins et al., 2010). Adding to this, research has provided evidence, that the percentage of minors who pathologically gamble, is higher than the percentage of adults who pathologically gamble (Blinn-Pike et al., 2010).

### **2.3 Relation between gambling and poverty**

Looking at the gambling problems and the relation with poverty, it can be concluded that the current literature has had a growing interest towards the relationship between poverty and gambling problems. Nower et al. (2014) examined the relation between poverty gambling problems, using a mixed-methods approach. They combined qualitative interviews with quantitative surveys. The results provide evidence that individuals are more likely to encounter gambling problems, when they come from a lower background, compared to a higher status background. Matheson et al. (2014), conducted similar research, where they focused on the prevalence of gambling problems amount clients of a homeless shelter in Toronto. They did this by using a survey-based method. Their findings were that a significant amount of the people in the shelter experienced gambling problems. Sharman et al. (2015) found similar results in their research about problematic gambling in the homeless community in the United Kingdom. The method was slightly different from Matheson et al. (2014), as Sharman et al. (2015) used a cross-sectional survey. Wilson (2009) and Barnes et al. (2013) focused on the relation on a broader scale. They both studied the impact of the neighbourhood-level socioeconomic disadvantages on gambling behaviour. Wilson used a quantitative data analysis, while Barnes et al. used both qualitative and quantitative methods. The results from both researches indicate that a higher level of socioeconomic disadvantage, tend to lead to a higher prevalence of gambling problems.

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Roberts et al. (2017) conducted research focused on the individual level. They found that individuals who were dealing with financial problems, were more likely to have gambling problems. Additionally, Atherton and Beynon (2018) also performed research regarding the relation at an individual level, by using multiple existing data sets and a wide body of literature, to explore the harm from gambling. They concluded that having economic difficulties could contribute to harms that originate from gambling. Several studies have provided evidence regarding the clustering of gambling and gambling options in areas that socioeconomically disadvantaged. Shaffer et al. (2002), Gilliland and Ross (2005), McMillen and Doran (2006), Wardle et al. (2014), and Barratt et al. (2014) used numerous methods, which include surveys, data analysis, and geographic mapping to examine this relation. The findings indicate that there is a probable relation between areas that are socioeconomically disadvantages and the clustering of gambling and gambling options.

In contrast to the other findings about the relation between poverty and gambling risk behaviour, a study by Riley et al. (2021) found that there were other factors that were of influence on gambling behaviour. The authors suggest that more social factors, such as the attitude of Friends and Family towards gambling, and the social connectedness play a role in gambling behaviour rather than the childhood income. This is supported by Vegni et al. (2019), who stated that the relation between the parental income and gambling behaviour was more complex.

## **2.4 Socioeconomic status**

In the paper is the impact of the independent variable, the socioeconomic status of the parents, on the gambling risk behaviour examined. The socioeconomic status, also known as the SES, refers to the social and economic position of an individual in the society (Adler & Newman, 2002). This position is normally based on various factors, which include the education, occupation, income, and wealth. Research has shown that the status of the parent is a good indicator for the development of certain aspects in the child's life (Brooks-Gunn & Duncan, 1997). This includes the academic achievements, the health, and the cognitive development of the child. This is caused

by the SES, as it can have an impact on the availability of opportunities and resources that are provided to the child, by the parents.

The current research regarding this, has mainly focused on the influence of factors which are more individually, such as peer influences, personality traits and impulsivity of the individual on the gambling behaviour (Del Prete et al., 2017; Navas et al., 2017; Macia et al., 2023). The research has little attention given to the parental socioeconomic status and the potential influence of it. This gap is relevant for creating a better understanding of the broader social determinants of gambling behaviour and for what it can implicate for policies that intervene (Volberg et al., 2010).

It is important to get a better understanding of the influence of the parental socioeconomic status on gambling behaviour for multiple reasons. Firstly, the socioeconomic status can have a significant impact on the upbringing, access to resources, and the opportunities of a person. Which can all have an influence on how the attitudes, beliefs, and behaviour is shaped (Vukojevic et al., 2017). Secondly, the status could influence how the risk factors, which are also related to the gambling behaviour, are transmitted from one generation onto the next (Riley et al., 2021). Lastly, considering a potential relation between the socioeconomic status and the other risk factors, such as impulsivity, can help to create a better understanding of the causation of gambling behaviour.

## **2.5 Childhood income**

In the paper, the influence of different types of childhood income on gambling behaviour will be examined as well. It is important to note that the socioeconomic status and childhood income are not distinct variables but rather interconnected components within the broader construct of the socioeconomic status. Childhood income refers to the financial resources that are available to an individual during their younger years, which is typically up to the age of 18. This can include the income which is earned by the individual's parents or other caregivers. This income can come from employment, self-employment, or other sources. Additionally, the childhood income may

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include income from government assistance programs, such as social welfare, housing assistance, or healthcare assistance. The level and the stability of the childhood income can have a significant impact on the development and prospects, of an individual (Duncan & Magnuson., 2012). This can be of influence for factors such as their education, health, and their socioeconomic status as an adult.

The current research shows that being employed is linked to lower rates of gambling behaviour, compared to individuals who have an unstable employment or who are unemployed (Binde & Romild, 2020; Raybould et al., 2021). This suggests that financial stability has an influence on the gambling behaviour. However, the current literature provides not enough information on the influence of unearned income, such as inheritances, and assistance programs on the gambling behaviour (Lind et al., 2022). This gap can be filled by showing how different types of income, including unearned income types, have an influence on gambling behaviour.

## **2.6 Control variables**

It is also important to incorporate the influence of control variables in the research. In this research, age and gender are used as control variables. The current literature does recognise both variables as influential factors for gambling behaviour (Turowski et al., 2022). Existing research shows that male individuals are associated to gambling in public places, while female individuals are more associated to gambling online in home settings (Svensson et al., 2011; Salonen et al., 2018). However, regarding poverty and gambling risk taking behaviour, there is still a limitation in the existing literature. Understanding the relationship better can be important to help fill the gap, which can be beneficial for designing adequate prevention strategies, policies, and intervention programs that will provide the need of the specific individual.

Overall, the existing research suggests that there could be a relationship between growing up in poverty and gambling risk-taking behaviour, however, the nature of this relationship is complex and influenced by many different factors. The different types of childhood income could also have a different impact on gambling behaviour in adulthood. In conclusion, further research is needed to better understand the relationship between growing up in poverty and gambling behaviour. Additionally, it is also needed to identify strategies for preventing or reducing problematic gambling behaviour effectively.

## **2.7 Hypothesis**

Having considered the existing literature, it is hypothesised in this paper that growing up in poverty is related to higher levels of gambling risk-taking behaviour among. Moreover, it is hypothesised that different types of childhood income, will have varying effects on gambling behaviour. This hypothesis is built on the findings of existing research that suggests that the socioeconomic status, including childhood income, can have long-lasting effects on the outcomes of adult, which include health behaviours such as gambling.

Firstly, it is expected that growing up in poverty has a relation with higher levels of gambling risk-taking behaviour. Research implicates that the status has a significant impact on the risk-taking behaviour of adolescents. Individuals whose families had a lower socioeconomic status, showed a lower level of cognitive control, which increases the tendency to engage in risky situations (Brieant et al., 2020). Lawson (2018) and Zheng & Luo (2009) showed that individuals that grew up in poverty, with a lower socioeconomic status, have a higher probability to engage in risky health behaviours, which includes gambling, compared to individuals who came from richer backgrounds. This can be caused by multiple factors, such as the higher levels of adversity and stress that they encounter, the restricted access to opportunities and resources, and being more exposes to community and peer norms, which encourage this type of behaviour. Adding to this, growing up in poverty can influence the mental health, and the academic achievement, which can all add to a higher likelihood to undertake gambling risk-taking behaviour.

Secondly, it is expected that different types of childhood income may have varying effects on the gambling behaviour among adults. This is based on research by Black et al. (2021), which suggests that individuals who grew up in households that received government assistance programs have a higher likelihood to undertake more risk-taking gambling behaviour, compared to individuals who did not receive this assistance. This could be caused by the social isolation and the stigma, which are often associated to these government assistance programs. This can lead to them being more likely to engage in risk-taking behaviours, as a coping mechanism.

To conclude, the following is hypothesised by the paper:

*H1: 'Growing up in poverty is related to higher levels of gambling risk-taking behaviour among adults.'*

*H2: 'Different types of childhood income have different effects on gambling behaviour.'*

### **3 Methodology**

The focus of this research is the relation between growing up in poverty and the gambling risk behaviour and whether different types of childhood income impact gambling behaviour among adults. The independent variable is upbringing situation of individuals. The dependent variable is the gambling behaviour of gamblers.

#### **3.1 Survey**

The methodology that will be used is a survey experiment. In the experiment, the questionnaire will be divided into three main sections. The first section will consist of questions, which are self-developed, specifically created for this survey. The questions regard the attitude towards gambling, whether the participants have gambled, whether gambling should be legalised and regulated by the government, and whether the participant has sought help because of a gambling problem.

#### **3.2 Dospert**

After the first section, different gambling scenarios will be presented. This is used to analyse the gambling risk-taking propensity scale, which is known as the Dospert score (Weber, Markiewicz, 2013). The participants must rank how likely they are to participate in the scenario on a scale from 1, which is very unlikely, to 5, which is very likely. The Dospert scale can assess the willingness of an individual to take risks across different domains, including financial decisions, social interactions, and safety and health choices. The Dospert scale builds on the notion that the risk-taking behaviour of individuals is influenced by domain-specific factors and personality traits. The scale provides an insight into the individual differences in risk preferences, which results to the scale being widely used in research. It will present the the risk perception of an individual. The scale is often modified to fit the specific research needs of the study. As a results, different variations are used in different studies.



### **3.3 Participant characteristics**

In the third section, questions about the personal situation of the individual will be asked. First, they will be asked what the income was of their parents or caregiver during their upbringing. Secondly, the level of education of the parents will be asked. Hereafter, the participants will be asked what the primary sources of their parent's income was. If the option, government assistance programs was selected, an extra question was asked to find out from which specific program they received assistance. Hereafter, the participants are asked whether their financial situation had an impact on their experiences, and how it did or did not affect it. Additionally, some control variables are asked to the participants, such as their age, and their gender.

### **3.4 Target audience**

The targeted sample size of the research was between 100 and 200. A power calculation provided us with a targeted size of 138, which was based on a targeted R-squared without the control variables of 0.25, and a targeted R-squared with the control variables of 0.30, making it a moderate proportion. The people targeted for the experiment will be students from the age 18 up to 25. The reason for this is that prosperity has greatly increased over time, causing older respondents to be more likely to indicate that they grew up in poverty. This group also had lower levels of education. Additionally, the older generations had much less exposure to online gambling and may not be as active online. In other words, there are significant cohort effects that make it difficult to distinguish the exact driver. Since the main question does not examine generational effects, only respondents of a certain age are selected. Additionally, the research focusses on the gambling risk-behaviour in the Netherlands. Therefore, the people targeted will be Dutch.

After the experiment has been carried out, the data will be retrieved and put into the data analysis program Stata. First, there will be looked at the general difference in gambling behaviour between different categories. Hereafter, the data will be analysed in depth, by examining the difference in gambling behaviour between individuals growing up in poverty and growing up in a richer environment. Hereafter a conclusion can be drawn based on the analysed data. All the data that is used for the research comes from the survey that have been designed for the experiment. The results that the surveys present is the data that will be used to determine the outcome of the research.

## 4 Results

In this section, the results of the experiment will be presented. First, some descriptive statistics will be stated, whereafter the results that include the outcomes of the statistical tests performed to assess the relationships, differences, or associations between variables will be presented.

### 4.1 Descriptive statistics

The first test that was conducted, was to see the differences in the Dospert score between the previous gambling behaviour groups. The groups were ranked from 1, which was that the participant had never gambled before, to 5, which was that the participant had gambled a lot.

TABLE 1. DOSPERT SCORE BASED ON THE PREVIOUS GAMBLING BEHAVIOUR

Previous gambling behaviour	Observations	Average Dospert Score
Never gambled	39	1.349
Gambled once or twice	38	1.763
Gambled a decent amount	39	2.154
Gambled quite often	23	3.330
Have gambled a lot	12	3.858

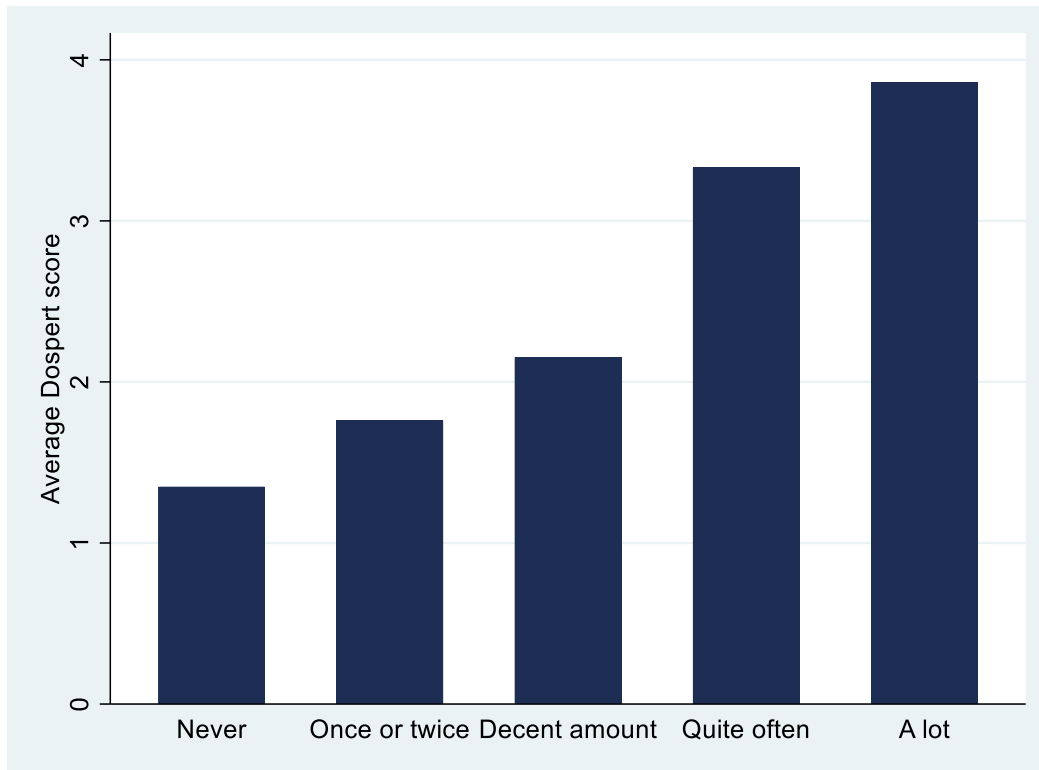


FIGURE 1. DOSPERT SCORE BASED ON THE PREVIOUS GAMBLING BEHAVIOUR

The results show that as the participants had taken part in more gambling, that the Dospert score goes up. In the results 74,2% of the participants has gambled at least once in their life. This is lower than the national %, which was 83% in 2021 (Intraval, 2021). The calculated correlation coefficient between the two variables is 0.7174, which means that the magnitude of the correlation coefficient can be interpreted as a strong correlation.

Hereafter, there will be looked at the relation between the Dospert score and the income and the education of the parents, which together make the socioeconomic status. The income levels and the different levels of education are based on data that was retrieved from the CBS (2022a; 2022b).

TABLE 2. DOSPERT SCORE PER INCOME LEVEL

Income level	Observations	Average Dospert score
Low (€0 - €41.000)	25	2.724
Below average (€41.200 - €65.200)	33	2.4
Average (+- €75.200)	37	2.045946
Above average (€80.900 - €127.100)	35	1.774286
High (€127.100 >)	21	1.971429

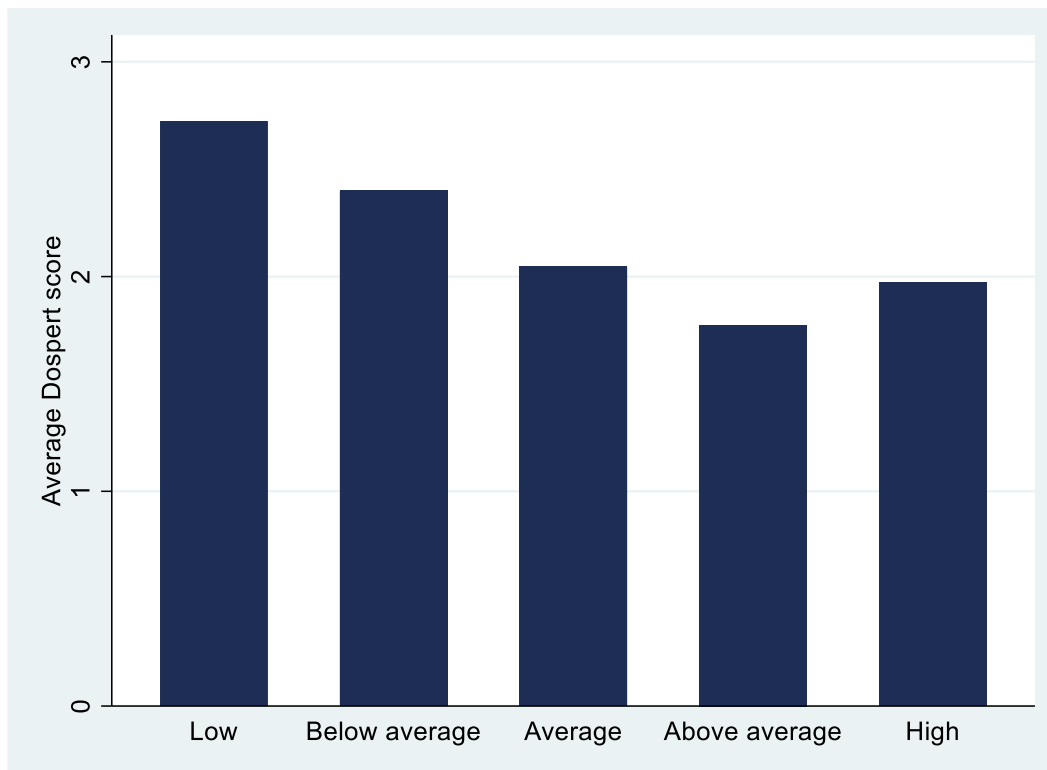


FIGURE 2. DOSPERT SCORE PER INCOME LEVEL

By looking at the data in the table, as the income increases, the Dospert score decreased. However, when the income is at the high level, it increases again. This could be possibly explained by reasoning that when you have such a high income, that you do not worry about money anymore and start to act riskier. A normal regression model stated a p-value of 0.001, showing that the relation between the Dospert score and the income level is significant.

TABLE 3. DOSPERT SCORE PER EDUCATION LEVEL

Education level	Observations	Average Dospert score
Low (below MBO)	33	3.009091
Average (MBO)	48	2.016667
High (HBO/WO)	70	1.862857

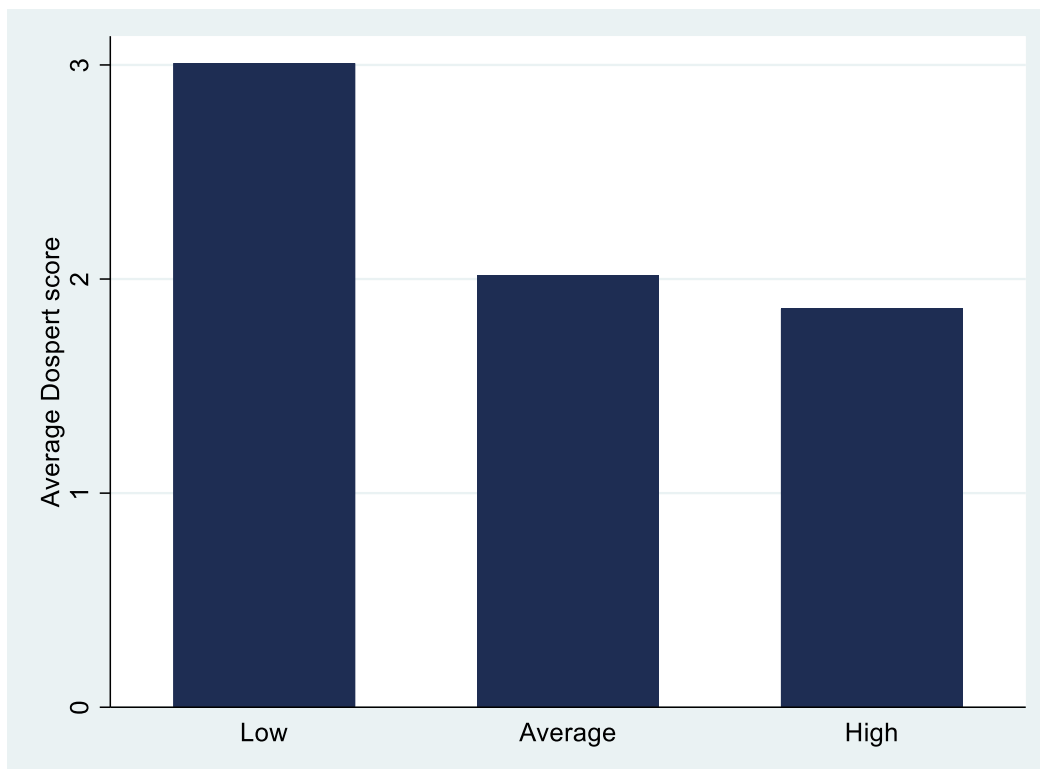


FIGURE 3. DOSPERT SCORE PER EDUCATION LEVEL

In the data from the table above, as the level of education increases, the Dospert score decreases. The data could also be distorted, as the number of observations with a high education level is twice the size of the number of observations from the low level. A normal regression model stated a p-value of 0.000, making the relation between the Dospert score and the education level significant.

Next, a t-test was conducted to see whether there is a difference between the average risk taken between the genders in the experiment. A t-test was not possible, as a Shapiro-Wilk test stated a p-value of 0.0000 for the Dospert average, which means that the scores are not normally distributed. As the Dospert scores are not normally distributed, a Wilcoxon rank-sum test was conducted, to see whether the differences between the genders is significant.

TABLE 4. DESCRIPTIVE STATISTICS PER GENDER

	Male	Female
Observations	95	56
Average Dospert Score	2.489474	1.607143

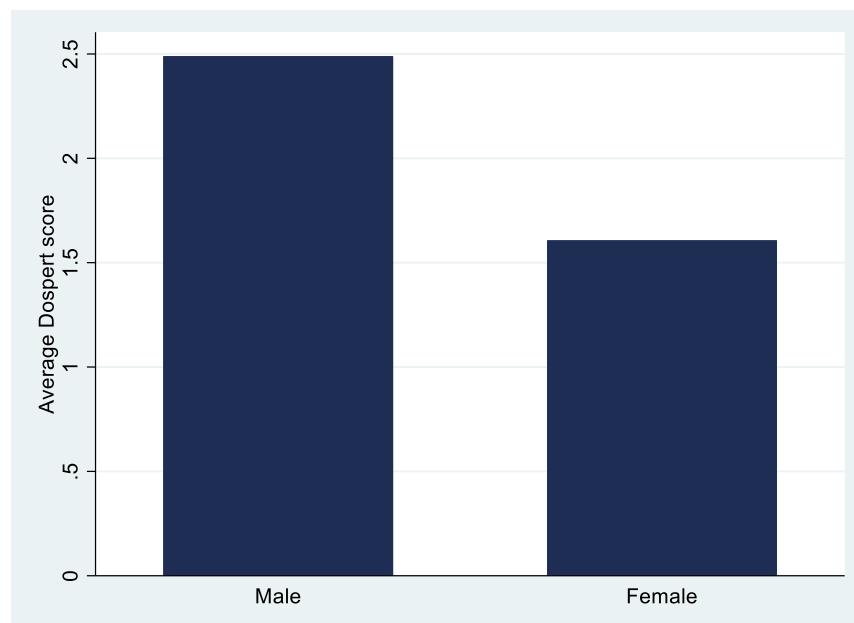


FIGURE 4. AVERAGE DOSPERT SCORE PER GENDER

As can be seen in the table and graph above, there have been 151 observations in the experiment, of which 95 are male, and 56 are females. The average Dospert score is much higher for the gender Male. The difference in the score between the genders can be seen as significant, as the P-value that was given by the Wilcoxon rank-sum test was 0.0000.

TABLE 5. DOSPERT SCORE PER AGE

Age	Observations	Average Dospert score
18	6	2.317
19	10	2.960
20	17	2.459
21	13	2.162
22	20	2.490
23	21	2.300
24	24	2.079
25	40	1.628



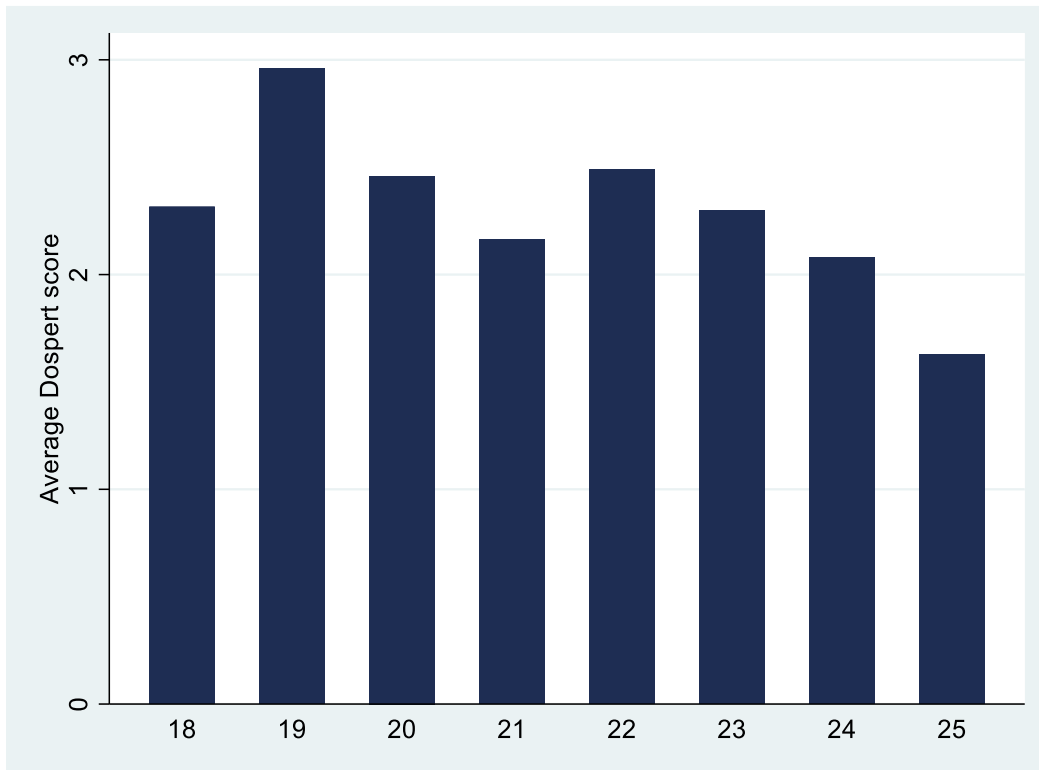


FIGURE 5. DOSPERT SCORE PER AGE

Lastly, there is looked at the differences between the age groups. By looking at the average Dospert scores, the score mostly goes down when the participants have a higher age. You can argue that this can also be the case since more participants were of a higher age, and the lowest age only consists of 6 observations.

## 4.2 Data analysis

In the next section, the relationships, differences, or associations between variables will be presented. The first relation that is analysed is relationship between the attitude towards gambling, the previous gambling behaviour and the Dospert score. The attitude towards gambling was based on the question: "How would you describe your overall attitude towards gambling?", where the possible responses were ranked from 1, which was "I am negative towards gambling", to 5, which was "I am positive towards gambling". The previous gambling behaviour was based on the question: "Have you ever gambled (online) before", where the possible responses were ranked from 1, which was "I have not gambled before", to 5, which was "I have gambled a lot". To analyse the relation, two normal regression models will be used, and two regressions with the control variables age and gender will be performed.

TABLE 6. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DOSPERT SCORE AND ATTITUDE

Attitude	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Dospert_avg	.819	.069	11.88	0	.683	.955	***
Constant	.905	.167	5.43	0	.576	1.234	***
Mean dependent var		2.675	SD dependent var			1.278	
R-squared		0.487	Number of obs			151	
F-test		141.218	Prob > F			0.000	
Akaike crit. (AIC)		404.992	Bayesian crit. (BIC)			411.026	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

TABLE 7. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DOSPERT SCORE, AGE, GENDER, ATTITUDE

Attitude	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Dospert_avg	.842	.078	10.73	0	.687	.997	***
Age	.093	.037	2.54	.012	.021	.166	**
Gender	-.179	.169	-1.06	.292	-.513	.155	
Constant	.58	.461	1.26	.21	-.33	1.491	
Mean dependent var		2.675	SD dependent var			1.278	
R-squared		0.517	Number of obs			151	
F-test		52.531	Prob > F			0.000	
Akaike crit. (AIC)		399.651	Bayesian crit. (BIC)			411.720	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

As can be seen in both the regressions, increases the attitude towards gambling, when the Dospert score goes up. By looking at the P-value, which is 0.000 for both regressions, it can be concluded that this relation is significant. Additionally, the R-squared values are quite high in both regressions. This indicates a stronger relationship between the independent and dependent variables, which means that the regression model provides a good fit. Lastly, the variable age proves to be significant in this relation as well.

TABLE 8. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DOSPERT SCORE AND THE PREVIOUS GAMBLING BEHAVIOUR

Gambling_behavio ur	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Dospert_avg	.822	.065	12.57	0	.693	.951	***
Constant	.766	.158	4.84	0	.453	1.078	***
Mean dependent var		2.543	SD dependent var			1.248	
R-squared		0.515	Number of obs			151	
F-test		158.002	Prob > F			0.000	
Akaike crit. (AIC)		389.162	Bayesian crit. (BIC)			395.197	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

TABLE 9. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DOSPERT SCORE AND THE PREVIOUS GAMBLING BEHAVIOUR

Gambling_behaviour	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Dospert_avg	.781	.073	10.63	0	.635	.926	***
Age	.06	.034	1.73	.085	-.008	.127	*
Gender	-.433	.158	-2.74	.007	-.747	-.12	***
Constant	1.117	.431	2.59	.011	.264	1.97	**
Mean dependent var		2.543	SD dependent var			1.248	
R-squared		0.555	Number of obs			151	
F-test		61.231	Prob > F			0.000	
Akaike crit. (AIC)		379.897	Bayesian crit. (BIC)			391.966	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

In both the regressions, as the Dospert score goes up, the gambling behaviour, goes up as well. This means that people who take more risks have participated in gambling more often. By looking at the P-values, it can be concluded that the relation is significant. Additionally, in this relation, the control variable gender shows to be significant as well.

The next analysis is to see what the influence of the income, and the education is on the gambling behaviour. To do this, four regressions will be used. In the first regression, the independent variable will be the income, whereafter the same regression will be used, but with control variables included. The next regression will include the independent variable education, whereafter the control variables will be added in the fourth regression.

TABLE 10. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN INCOME AND THE PREVIOUS GAMBLING BEHAVIOUR

Gambling_behaviour	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Income	-.094	.079	-1.20	.232	-.249	.061	
Constant	2.822	.254	11.13	0	2.321	3.323	***
Mean dependent var		2.543	SD dependent var			1.248	
R-squared		0.010	Number of obs			151	
F-test		1.443	Prob > F			0.232	
Akaike crit. (AIC)		496.866	Bayesian crit. (BIC)			502.901	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**TABLE 11. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN INCOME, AGE, GENDER, AND THE PREVIOUS GAMBLING BEHAVIOUR**

Gambling_behavior ur	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Income	-.088	.07	-1.25	.213	-.227 .051	
Age	-.078	.043	-1.82	.071	-.162 .007	*
Gender	-1.169	.188	-6.21	0	-1.541 -.797	***
Constant	4.839	.438	11.04	0	3.973 5.705	***
Mean dependent var		2.543	SD dependent var		1.248	
R-squared		0.222	Number of obs		151	
F-test		13.992	Prob > F		0.000	
Akaike crit. (AIC)		464.391	Bayesian crit. (BIC)		476.461	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**TABLE 12. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN EDUCATION AND THE PREVIOUS GAMBLING BEHAVIOUR**

Gambling_behavior ur	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Education	-.363	.126	-2.89	.004	-.611 -.115	***
Constant	3.358	.299	11.23	0	2.767 3.949	***
Mean dependent var		2.543	SD dependent var		1.248	
R-squared		0.053	Number of obs		151	
F-test		8.339	Prob > F		0.004	
Akaike crit. (AIC)		490.099	Bayesian crit. (BIC)		496.133	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**TABLE 13. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN EDUCATION, AGE, GENDER, AND THE PREVIOUS GAMBLING BEHAVIOUR**

Gambling_behavior ur	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Education	-.317	.113	-2.80	.006	-.54 -.093	***
Age	-.081	.042	-1.94	.055	-.163 .002	*
Gender	-1.133	.185	-6.13	0	-1.498 -.768	***
Constant	5.258	.446	11.80	0	4.378 6.139	***
Mean dependent var		2.543	SD dependent var		1.248	
R-squared		0.254	Number of obs		151	
F-test		16.659	Prob > F		0.000	
Akaike crit. (AIC)		458.130	Bayesian crit. (BIC)		470.199	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The first two regressions show that as the income goes up, the gambling behaviour goes down. This relation is however not significant, as the p-values are in both regressions above 0.05. The next two regressions show that as the education goes up, the gambling behaviour goes down. This relation is significant, as the p-values are below 0.05. It is shown in the regressions with the control variables, that gender has a significant influence, while age does not. Additionally, an increase in the R-squared can be seen in the regressions, where age and gender are included.

The next analysis is to see what the combined relation of the Dospert score, the income, and the education is on the gambling behaviour. The results will show whether a higher socioeconomic status is related to the gambling behaviour. To do this, four regressions will be used. In the first regression the independent variables will be the Dospert score and the income, where the independent variables in the second regression will be the Dospert score and the education. In the third regression, all three independent variables will be used. In the last regression, age and gender will be added as control variables.

TABLE 14. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DOSPERT SCORE, INCOME, AND THE PREVIOUS GAMBLING BEHAVIOUR

Gambling_behaviour	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Dospert_avg	.855	.067	12.67	0	.721	.988	***
Income	.101	.057	1.78	.077	-.011	.213	*
Constant	.396	.26	1.52	.13	-.118	.911	
Mean dependent var		2.543	SD dependent var			1.248	
R-squared		0.525	Number of obs			151	
F-test		81.737	Prob > F			0.000	
Akaike crit. (AIC)		387.962	Bayesian crit. (BIC)			397.014	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**TABLE 15. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DOSPERT SCORE, EDUCATION, AND THE PREVIOUS GAMBLING BEHAVIOUR**

Gambling_behavior ur	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Dospert_avg	.843	.071	11.91	0	.703 .983	***
Education	.076	.097	0.78	.437	-.117 .268	
Constant	.551	.319	1.73	.086	-.079 1.18	*
Mean dependent var		2.543	SD dependent var		1.248	
R-squared		0.517	Number of obs		151	
F-test		79.096	Prob > F		0.000	
Akaike crit. (AIC)		390.545	Bayesian crit. (BIC)		399.597	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**TABLE 16. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DOSPERT SCORE, INCOME, EDUCATION, AND THE PREVIOUS GAMBLING BEHAVIOUR**

Gambling_behavior ur	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Dospert_avg	.841	.07	11.97	0	.702 .98	***
Income	.143	.082	1.75	.083	-.019 .305	*
Education	-.1	.139	-0.71	.476	-.375 .176	
Constant	.525	.317	1.66	.099	-.101 1.151	*
Mean dependent var		2.543	SD dependent var		1.248	
R-squared		0.526	Number of obs		151	
F-test		54.482	Prob > F		0.000	
Akaike crit. (AIC)		389.438	Bayesian crit. (BIC)		401.507	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**TABLE 17. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DOSPERT SCORE, INCOME, EDUCATION, AGE, GENDER, AND THE PREVIOUS GAMBLING BEHAVIOUR**

Gambling_behavior ur	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Dospert_avg	.821	.081	10.18	0	.662 .981	***
Income	.148	.079	1.87	.063	-.008 .304	*
Education	-.077	.135	-0.57	.57	-.343 .19	
Age	.073	.035	2.08	.039	.004 .143	**
Gender	-.398	.159	-2.51	.013	-.711 -.085	**
Constant	.638	.564	1.13	.26	-.477 1.753	
Mean dependent var		2.543	SD dependent var		1.248	
R-squared		0.569	Number of obs		151	
F-test		38.311	Prob > F		0.000	
Akaike crit. (AIC)		379.174	Bayesian crit. (BIC)		397.278	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The results show that as the income of the parents goes up, the participants are more likely to participate in gambling activities, while the gambling behaviour goes down, when the education goes up. However, the P-values show that the relations are not significant. The influence of a higher Dospert score on the previous gambling behaviour is similar to the results presented in the previous regressions, as it shows a significant relation. As the relation between education and gambling behaviour was significant without the Dospert score added, but not significant with the variable included, it was decided to run a Spearman's correlation to assess the relationship between the Dospert score and education. There was a negative correlation between the Dospert score and the education, which was statistically significant,  $r_s = -.2624$ ,  $p = .0011$ . The results suggest that the Dospert score might be a more influential factor in explaining the behaviour, as it made the effect of education non-significant. Age and gender are both proven to be significant as well. The value of the R-squared is quite high in the last two regression, showing that the independent variables explain a large proportion of the variance of the gambling behaviour.

TABLE 18. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN RECEIVING A SUPPLEMENTARY GRANT AND THE PREVIOUS GAMBLING BEHAVIOUR

Gambling_behavio ur	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Supplementary_gr ant	-.461	.219	-2.10	.037	-.895	-.027	**
Constant	3.328	.387	8.60	0	2.563	4.092	***
Mean dependent var		2.543	SD dependent var			1.248	
R-squared		0.029	Number of obs			151	
F-test		4.411	Prob > F			0.037	
Akaike crit. (AIC)		493.916	Bayesian crit. (BIC)			499.950	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The results from the regression model above show that as an individual is not able to receive a supplementary grant, as in the data receiving the grant is value 1, and not receiving the grant is value 2, the gambling behaviour goes down. The P-value shows that this relation is significant.



The next analysis is to find the relation between the influence of the different types of income of the parents, which are employment, self-employment, investments, social security or pension, and government assistance, to the gambling behaviour. In the second regression, gender and age are used as control variables.

TABLE 19. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DIFFERENT TYPES OF INCOME AND THE PREVIOUS GAMBLING BEHAVIOUR

Gambling_behaviour	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
employment	.387	.406	0.95	.342	-.415	1.189	
self_employment	-.111	.328	-0.34	.736	-.759	.537	
investments	.091	.282	0.32	.748	-.466	.648	
social_security	.134	.462	0.29	.773	-.78	1.047	
government_assistance	1.399	.32	4.37	0	.766	2.032	***
Constant	2.051	.423	4.85	0	1.215	2.887	***
Mean dependent var		2.543	SD dependent var			1.248	
R-squared		0.139	Number of obs			151	
F-test		4.665	Prob > F			0.001	
Akaike crit. (AIC)		483.799	Bayesian crit. (BIC)			501.903	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

TABLE 20. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DIFFERENT TYPES OF INCOME, AGE, GENDER, AND THE PREVIOUS GAMBLING BEHAVIOUR

Gambling_behaviour	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
employment	.403	.372	1.08	.28	-.332	1.138	
self_employment	-.131	.297	-0.44	.66	-.719	.457	
investments	.035	.26	0.13	.893	-.48	.549	
social_security	.049	.429	0.12	.908	-.798	.897	
government_assistance	1.066	.297	3.59	0	.479	1.654	***
Age	-.049	.043	-1.14	.254	-.134	.036	
Gender	-1.061	.184	-5.77	0	-1.424	-.697	***
Constant	3.817	.563	6.78	0	2.704	4.929	***
Mean dependent var		2.543	SD dependent var			1.248	
R-squared		0.302	Number of obs			151	
F-test		8.855	Prob > F			0.000	
Akaike crit. (AIC)		455.949	Bayesian crit. (BIC)			480.087	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The regression shows that the different types of income have mixed results on the gambling behaviour. The behaviour goes up when a person has his income through employment, investments, social security, and government assistance, while the score goes down when the income is through self-employment. However, the only relation that is significant, is the relationship between the gambling behaviour and the income through government assistance. Additionally, gender shows to be significant as well. Lastly, the R-squared from both regressions show that the control variables are important to explain the differentiation in the dependent variable here as well.

The next step is to analyse whether there is a difference in the relation between the different types of government assistance and the gambling behaviour. The five government assistance programs used in this research are social assistance, unemployment benefits, debt assistance, food banks assistance and housing allowance.

TABLE 21. REGRESSION ANALYSIS RESULTS SHOWING THE RELATIONSHIP BETWEEN THE DIFFERENT TYPES OF GOVERNMENT ASSISTANCE PROGRAMS AND THE PREVIOUS GAMBLING BEHAVIOUR

Gambling_behavio ur	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
social_assistance	-.383	.498	-0.77	.443	-1.367	.601	
unemployment_be nef~s	1.77	.411	4.30	0	.957	2.582	***
debt_assistance	.965	.905	1.07	.288	-.824	2.754	
food_banks	.965	.905	1.07	.288	-.824	2.754	
housing_allowance	2.027	1.487	1.36	.175	-.911	4.966	
Constant	2.391	.098	24.45	0	2.197	2.584	***
Mean dependent var		2.543	SD dependent var			1.248	
R-squared		0.187	Number of obs			151	
F-test		6.650	Prob > F			0.000	
Akaike crit. (AIC)		475.147	Bayesian crit. (BIC)			493.251	

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

The results show that the gambling behaviour goes up for all government assistance programs, except for the social assistance program. By looking at the P-value, only the relation between the unemployment benefits with the behaviour are significant.

Within the quantitative data, there was also a qualitative question included. This question related to the impact that the financial situation of your family had on the childhood experiences. What the results show, is that people give different definitions to a situation that had impact or no impact. Some responses relate (no) impact as something negative, while others label it as a positive notion. Adding to this, the number of people who refer to impact as a negative notion, is higher for individuals who had participated more in gambling behaviour, while the amount of people who refer to impact as a positive thing, is higher for individuals who had participated less in gambling behaviour. Below are some examples to illustrate how the option “much impact” was defined, combined with the level of gambling behaviour.

“The situation created a living situation which had its impact. However, you only really realise that later.” – Gambled quite often

“Gave me the opportunity to travel. Also, I could choose where I want to study no matter the costs.” – Gambled once or twice

“We could not buy all the things, which are considered as basic necessities.” – Gambled quite often

“I had a carefree childhood without worries about money, I think looking back we were spoiled.” – Gambled once or twice

### **4.3 Interpretation of the results**

In summary, the results of our study partially support the hypotheses under investigation. Firstly, evidence was found, which supports the hypothesis that growing up in poverty is related to higher levels of gambling risk-taking behaviour among adults. The level of education that your parents received, proved to be a significant factor, indicating that individuals whose parents received lower levels of education were more likely to engage in gambling risk-taking behaviour. However, it was shown that this relationship was not significant, when the Dospert score was also included in the regression. This shows that the Dospert score was the strongest predictor of the gambling behaviour. This finding implies that risk perception plays a crucial role in influencing the gambling

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behaviour of individuals. Additionally, there was no evidence found that the level of income from your parents has a significant effect on the gambling behaviour. Adding to this, do the results prove a significant influence of the Dospert score on the attitude towards gambling. Individuals who take more risk are more positive towards gambling. This shows again that risk perception plays an important role in the gambling environment.

Secondly, the results suggest that the type of childhood income has differential effects on the gambling behaviour. However, among the various types of income, only receiving government assistance as a type of income showed to have a significant relation with the gambling behaviour. Individuals who received government assistance during childhood, showed higher levels of gambling behaviour. Furthermore, it was shown by the results that receiving a supplementary grant has a significant influence on the gambling behaviour, increasing the gambling behaviour when individuals received the grant.

Additionally, the results state that there are additional factors that have a significant effect on the gambling behaviour. Gender was found to be significant, while age was partially found to have a significant relation, with males and having a younger age showing a higher level of gambling risk-taking behaviour. Adding to this, did the results did provide evidence that gender and age are both important, as the R-squared improved for every regression, when they were included, showing that they are important to explain the differentiation in the dependent variable.

## 5 Conclusion and Discussion

The findings of this research can provide valuable insights into the relationship between childhood poverty, income sources, and adult gambling behaviour. The findings partially show support for the hypothesis that growing up in poverty is associated with higher levels of gambling risk-taking behaviour, with the level of education the parents received being the significant factor. Policy makers could use these findings to implement programs that will provide educational support and resources to families that are living in poverty. By doing this and addressing educational inequalities and offering a chance for parental education, it could help to reduce the change of gambling behaviour in the adulthood. However, the results show that the Dospert score was the best predictor of the gambling behaviour, with it being significant in every regression, showing that risk perception plays a crucial role in the relation. This complements the current research, which provides evidence for this relation (Morgan et al., 2002; Siegrist et al., 2005; Oei and Jardim, 2007; Breakwell, 2007; Ajzen, 2011). To address this, policy makers could use screening tools, to target individuals who are more likely to participate in gambling activities. Furthermore, they can use targeted interventions, which could help to enhance the risk perceptions of individuals.

Additionally, it was also found that government assistance, as a type of income, during the childhood has a significant effect on the gambling behaviour. This could be helpful for policy makers realise that they should be careful with designing and implementing the welfare problems, to make sure they do not accidentally contribute to the gambling behaviour. By offering additional support to the families who receive government assistance, they can help to mitigate the negative effects.

Furthermore, gender was proven to be an important variable to have an influence on the gambling behaviour. This could be beneficial for future policies, as they could develop intervention and prevention strategies that would consider the specific vulnerabilities and needs of different genders. Policy makers could do this by educational programs, support services, and targeted campaigns, which would address the challenges that are faced by the individuals per gender.

However, it is important to look at several possible limitations of the research, which could limit the generalizability of the results. Firstly, the study relies on data, which is self-reported. This could lead to an increase in the potential for response biases and memory recall issues. The external validity can also be influenced if only people from higher upbringing will participate, or if only few people that grew up with poverty participate. Future studies could benefit from employing measures, which are objectively or longitudinal designs, which can mitigate the above-mentioned limitations.

Secondly, the sample of this research consists of a specific demographic group, which limits the generalizability of the findings to other contexts of populations. To make valid claims about the findings, replication studies across diverse populations are needed.

While results regarding the relation could be beneficial for implications for potential policies, it is argued by Gupta and Derevensky (2008) that to have success with the potential treatments, the underlying psychological problems should be addressed in concordance with the gambling behaviour of the individual. Without isolating the individuals' situation into account, there will be no long-term success in the treatment. Current policies and interventions are primarily focussed on the individual level, mainly emphasizing responsible gambling measures and treatment options (Wardle et al., 2019). Research that addresses the interaction between poverty and gambling related harm and how policy interventions can effectively mitigate these issues, is required. Policy makers should address the underlying psychological factors together with gambling behaviour in their intervention and prevention efforts. They should focus on integrating mental health services into the gambling treatment programs. By doing this, hopefully the long-term success can be achieved.

Furthermore, it is important to recognize that several other factors can also contribute to gambling risk-taking behaviour. Examples are factors such as environmental, psychological, and cultural. Future research should consider incorporating these factors, to also capture these possible influences on the behaviour. Policy makers should take this into account and encourage a diverse range of intervention programs, which go beyond the individual-level. These programs could include collaborating with stakeholders that are relevant, and initiatives, which are

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community-based. Additionally, they should focus on developing policies that will consider the above-mentioned factors, which are environmental, psychological, and cultural factors to mitigate the negative gambling behaviour.

Despite the limitations, the research does provide new information on the interaction between childhood experiences, socioeconomic factors, and gambling behaviour, which is considered as quite complex. These findings contribute to the existing literature and can give implications for intervention and prevention efforts, which are aimed at mitigating the negative consequences that occur due to gambling risk-taking behaviour.

Further research should take the identified limitations into account and look for potential moderating or intervening factors, which can help to overcome the limitations and result in a better understanding of the mechanisms, which are underlying in the relationship between childhood poverty, income sources, and gambling behaviour.

Considering all the identified limitations, should further research look for potential moderating or intervening factors, which can help to overcome the limitations. Policy makers should support further research to replicate and expand on the findings from this paper. This could be done by performing research that uses longitudinal designs, more diverse and larger samples, and objective measures that can overcome the limitations that are related to self-reported data. This can result in a better understanding of the mechanisms, which are underlying in the relationship between childhood poverty, income sources, and gambling behaviour.

In conclusion, future research and policy makers should use a diverse approach, which will combine different factors to address the complex relation between poverty, income sources, and the gambling behaviour. By doing this, it could be possible to improve the intervention and prevention efforts, which results in reducing the harm that comes from gambling behaviour.

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## 7 Appendix

Thank you for participating in this experiment. It will approximately take around 5-10 minutes to complete. This experiment is for my Master Thesis for the study International Business at the Radboud University. By participating you are helping me significantly in my research.

In the survey, you will be given multiple different scenarios, whereafter you have to select on a scale from 1 (very unlikely) to 5 (very likely), how likely you are to participate in the scenario.

There are no right or wrong answers for the questions, so make a choice as if you are making a choice in real life. At the end some more general questions regarding your background will be asked. Your participation will be recorded anonymously.

If anything is unclear or if you have any questions, please contact me: [max.guetlich@ru.nl](mailto:max.guetlich@ru.nl)

How would you describe your overall attitude towards gambling?

- I am negative towards gambling
- I am somewhat negative towards gambling
- I am not negative, nor positive towards gambling
- I am somewhat positive towards gambling
- I am positive towards gambling

Have you ever gambled (online) before?

- I have not gambled before
- I have gambled once or twice
- I have gambled a decent amount
- I have gambled quite often
- I have gambled a lot

Do you agree that gambling has been legalized and regulated by the government?

- Definitely not
- Probably not
- Might or might not
- Probably yes
- Definitely yes

Have you ever sought help or support for a gambling addiction or problem?

- I have not
- I have sought some help
- I have sought a lot of help

Going to a casino and gambling a large amount of money with a chance of winning big.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

Betting a significant portion of your savings on a single hand or spin in a casino game.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

Playing a high-stakes poker game where the buy-in is very expensive.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

Participating in an underground gambling event with unknown and potentially dangerous individuals.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

Placing bets on sports events with high odds but significant potential payouts.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

Engaging in online gambling with a high-risk/high-reward game or betting strategy.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely



Trying out new and untested gambling techniques or systems with potentially higher risk.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

Betting on a long-shot outcome in a gambling activity despite the low probability of winning.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

Continuously increasing your bets in the hopes of recovering previous gambling losses.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

Gambling with borrowed money or using credit to finance your gambling activities.

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

What was your family's average income (before taxes) when you were a child?  
The numbers that are mentioned, are based on the household income composition from 2020 (CBS)

- The family income was low (€0 - €41.000)
- The family income was below average (€41.000 - €65.200)
- The family income was average (+- €75.200)
- The family income was above average (€80.900 - €127.100)
- The family income was high (€127.100 >)

What was the education your parents received?

- They received a low level of education (Below MBO)
- They received an average level of education (MBO)
- They received a high level of education (HBO/WO)

What were the primary sources of income for your parents or caregivers?

- Employment wages/salaries: This includes income earned from working a job or multiple jobs.
- Self-employment income: Income from their own business or freelance work.
- Investments: Income from investments such as stocks, bonds, real estate, or rental properties.
- Social security or pension
- Government assistance

Which government assistance programs did your family receive when you were growing up?

- They received Social Assistance (Bijstandsuitkering)
- They received Unemployment Benefits (Werkloosheidsuitkering)
- They received Debt Assistance (Schuldhelpverlening)
- They received assistance from Food Banks (Voedselbanken)
- They received Housing Allowance (Woonkostentoeslag)
- Other:

How did your family's financial situation impact your childhood experiences?  
Please explain how.

- It had no impact
- It had a slight impact
- It had much impact

Were/are you eligible for a supplementary grant as a student? (aanvullende beurs)

- Yes
- No

What is your gender?

- Male
- Female
- Other

What is your age?

- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25