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# The Effect of Negative Childhood Experiences and Gambling Cognitive Constructions on Gambling Behavior and Its Causes in Young Adulthood Period

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## Main Points

- The effect of adverse childhood experiences on individuals' gambling behavior was found to be statistically insignificant.
- Gambling behavior is negatively affected by cognitive reasons.
- A statistically significant effect of the negative childhood experiences on the reason for gambling and cognitive structures was found.
- Negative childhood experiences and cognitive structures explained 52% of the variation (variance, R2) in the causes of gambling.

**Abstract**

This study aimed to examine the cognitive structures and negative childhood experiences of young adults about gambling on gambling behavior and its causes. The study group consisted of 232 young adults aged 18 – 30 years from Gaziantep, Elâzığ, Malatya, Antalya, and İstanbul provinces who exhibited gambling behavior. Participants were provided a personal information form and examined using the South Oaks Gambling Screening Test, the Cognition Scale for Gambling, the Reasons for Gambling Scale, and the Childhood Negative Experiences Scale. The results revealed that the cognitive structures related to gambling affect gambling behaviors (= .714; $p < .01$) positively. Cognitive structures explained 13% of the change in the reasons for gambling and childhood negative experiences and cognitive structures explained 52% of the change in the reasons for gambling. It was also found that sociodemographic variables have an effect on gambling behavior and its causes. Finally, cognitive structures related to gambling and negative childhood experiences indirectly risk gambling behavior.

**Keywords:** cognitive structures, gambling, negative childhood experiences, young adult

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## Introduction

Gambling is defined as betting on a game, event or outcome, an uncertain situation, or the chance due to factors such as luck, with the intention of winning, with money or other objects of value, being aware of the risk (Goffman, 2006; Wagenaar, 2016). Nowadays, there are different types of gambling that are preferred as a means of pleasure, entertainment, and even relaxation. These can be divided into three types: luck, betting, and gambling (Yeşilay, 2018). The increasing number of studies that have been conducted all over the world (Auer & Griffiths, 2015), regardless of social and sociocultural differences, and changes in government policies and ethnic elements, have shown that gambling behavior is in the psychological, cognitive, and social sense of people actively or passively in this behavior or in the risk group (Hayer & Griffiths, 2015: 539).

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Although legal regulations on gambling age vary from country to country and these regulations may be prohibited or restricted, it is widely known that the vast majority engage in at least a variety of gambling activities such as scratch cards, national lotteries, and electronic or virtual gambling (Volberg et al., 2010).

The development of modern technologies, the spread of technology-based games, the legalization of gambling activities, and its social acceptance are factors that increase the prevalence of gambling in individuals. In addition, in many western countries, the legalization of gambling by governments to increase their income has also led to a substantial increase in the prevalence of gambling. The lack of family control, the use of anonymous identity, and age group have also affected the prevalence of gambling (Calado et al., 2017: 419).

Although gambling behavior could mean fun or even a harmless entertainment tool for people, this behavior can easily turn into addiction over time or into problematic behavior that causes psychosocial and economic strains on both the person and the family and society (Volberg et al., 2010). As a result, it would be useful to consider this behavior as a public health problem, as gambling affects individuals and society (Volberg, 1994).

Gambling behavior may have genetic, individual, or social reasons, as well as many external factors that can cause motivation for gambling behavior. This way, displaying gambling behavior in order to experience "excitement" or to escape or cope with some problems is among the important reasons for gambling (Karaaziz et al., 2019: 73). It has been stated that exogenous predispositions or influences can be the cause of gambling and those intrinsic motivations are as effective as extrinsic factors. As a result of this approach, more emphasis has been placed on motivations that increase attitudes toward gambling (Martin et al., 2011).

People may have extreme views about their chances of winning, which may indicate the existence of some cognitive patterns among the reasons for gambling (May et al., 2005). These cognitive structures explain why some individuals are prone to gambling behavior more while others are less prone. However, it is not a sufficient reason. The demographic characteristics (gender, age, and ethnicity), biological/biochemical factors, personality types, cognitive structures, external factors, and participation in other problematic behaviors can also cause gambling behavior (Hayer et al., 2005: 470).

Young adulthood is a period of plenitude and excess energy, opportunities, and rewards in many aspects. It is known that young adults gamble more frequently on a weekly or daily basis, often playing with someone and for money, than those who gamble at older ages (Lynch et al., 2004: 1119; Magoon & Ingersoll, 2006). Again, the main characteristic of this period is that it offers many opportunities for identity exploration. In addition, it contains the greatest contradictions, stresses, risks, and disappointments (as cited in Levinson [1996] Aktu, 2016: 164; Arnett, 2000: 473).

Considering gambling as a persistent, repetitive, and maladaptive behavior implies that it cannot be controlled and leads to important psychosocial consequences. Therefore, a coherent conceptual framework and a causal approach validated by biological and psychological factors were needed to explain the etiology of this behavior. Gambling behavior is the occurrence of negative consequences and the presence of individual factors that deviate from normal and healthy behavior (Blaszczynski & Nower, 2002: 488-489).

In addition to individual factors, various environmental factors contribute to the development and continuation of gambling behavior. Recent studies revealed that exposure to gambling behaviors during early periods of life, negative childhood experiences, and parental behaviors and attitudes affect individuals' future gambling attitudes (Magoon & Ingersoll, 2006: 15-16; Pitt, et al., 2017; Shead et al., 2010).

Childhood, whose relationship with gambling behavior and its causes is discussed, is considered as the period in which the most important causes of many mental or physical problems that a person may experience in the future. Adverse childhood experiences such as physical, emotional, and sexual abuse and neglect, abuse and violence against the child, and failure to provide for the child's basic needs (Çelik & Hocaoğlu, 2018).

Negative early age life experiences affect the areas of life such as self-knowledge, forming values, acquiring cognitive skills such as solving problems and making decisions, and social interaction (Wehmeyer et al., 1997). Problems that may arise in these life areas can stress young adults, but they can also lead to risky behaviors. It is known that early childhood experiences impact the development of risky behaviors and their consequences are reflected in adolescence and young adulthood (Fox et al., 2015). It is predicted that behavioral coping methods that are widely adopted to reduce the emotional impact of these experiences may create a risk in terms of tendency to gamble. Additionally, it is thought that risky behaviors have a function to meet an incomplete need in life. Therefore, it is very important to examine the factors underlying these behaviouse behaviors' factors (Lindberg et al., 2000).

Gambling behavior may have genetic, individual, or social reasons, and external factors can create motivation for gambling behavior. It has been stated that extrinsic predispositions or influences may be the cause of gambling and intrinsic motivations are as effective as extrinsic factors (Griffiths & Delfabbro, 2001). Thus, gambling behavior to experience "excitement" or to avoid/cope with some problems are among the important reasons for gambling (Keshavarz, 2020: 13). Making money and socializing can be added to these reasons for gambling (Karaaziz et al., 2019: 73).

To understand why individuals, continue to gamble despite being harmed in different areas, the literature needs to be discussed with a cognitive term. Considering the gambling behavior within the framework of Beck's (1976) cognitive framework, a person may believe in the luck of the red color and expect to win. This indicates that people have beliefs that affect their outcomes). Their belief that they can predict outcomes indicates that they have faulty gambling-related cognitions. It is known that these cognitions have an effect on monetary risk, frequency of

gambling, and urge to gamble (Raylu & Oei, 2004: 758). Because gambling games have unpredictable results and coincidences may occur in some game types. For example, it has been reported that cognitive distortions come to the fore more in machine games, especially those perceived to require a skill.

A cognitive approach is appropriate for understanding gambling behavior. This is because individuals face a series of decisions that can be strongly influenced by cognitive biases, thinking biases, and judgment errors when they place a bet or believe they will win (Toneatto et al., 1997: 254). Consequently, understanding the input of faulty cognitions related to gambling behavior is essential to correcting the problem and initiating preventive programs. The majority of the literature in Turkey examined the relationships between adult gambling levels and various variables. These studies were examined the relationship between, gambling behavior and psychopathology (Coşkun, 2017; Duvarcı, 1998; Kalyoncu et al., 2003; Kaya et al., 2002), psychological symptoms (Karaaziz et al., 2019) and risky behaviors (Çamur et al., 2007; Erdoğdu, 2017; Vayısoğlu et al., 2019).

Literature reviews have indicated that there was no study that discussed the relationship between negative childhood experiences and cognitive structures, gambling behavior, and its causes in our country. Additionally, to the best of the authors' knowledge, no other report has been found so far using all the variables together in this study. Considering the literature, the findings of this study will help to understand gambling behavior, as the increase in the frequency of gambling behavior may lead to problems that increase in frequency in the future.

In this sense, it is important to determine the extent of gambling behavior and work on the necessary interventions for a healthy social structure. Since there are not enough studies in our country, this study aims to fill the gap and provide a source for further studies on this topic.

## Methods

The current study was designed to determine the impact of negative childhood experiences and gambling-related cognitive structures on gambling behavior and causes in young adult individuals. This study was conducted with a casual screening design and a correlational research method. This research was conducted with the volunteers in various betting shops in Gaziantep, Elâzığ, Istanbul, Malatya, and Antalya between October 2019 and February 2020, after the approval of the Ethics Committee (-804.01-E.2004030003).

### Participants

The research population consisted of young adults who bet at the betting shop and elsewhere. The study sample consisted of 232 young adults between the ages of 18 – 30 years (SD = 3.57) who bet at the betting shop and elsewhere in Malatya, Elâzığ, Antalya, Istanbul, and Gaziantep. The participants were recruited with a convenience sampling method. Power analysis was performed using the G-Power 3.1 program, and the sample size was calculated as 188 with a .3 effect size, .05 margin of error, and .99 population representation power (Faul et al., 2009).

### Instruments

The Personal Information Form, South Oaks Gambling Screen Test (SOGST), Gambling-Related Cognitions Scale (CSG), Five-Factor Gambling Motives Scale (CONS), and Adverse Childhood Experience Turkish Form (CBAQ) were administered to young adults. The researcher prepared the Personal Information Form to evaluate the information about gender, age, marital status, education level, job status, financial status, the age she/he started betting, and the first betting game. The SOGST developed by Lesieur and Blume (1993) was used to measure the gambling behavior levels of young adults. The South Oaks Gambling Screen Test is commonly used to identify possible pathological gamblers. There are two studies on the Turkish validity and reliability of the SOGST. The final version of the scale was made by Duvarcı and Varan (2001). According to the current study, the total internal consistency coefficient of the scale was Cronbach's alpha = .8772, while the test – retest correlation was $r = .95$. Thus, it has started to be used as a valid and reliable scale that can be determine gambling behavior in Turkey (Duvarcı & Varan, 2001). In the current study, the internal consistency value of the form was calculated as .70.

### Five-Factor Gambling Motives Scale

The Five-Factor Gambling Motives Scale was developed by Lee et al. (2007) and Turkish validity and reliability study conducted by Arcan and Karancı (2014). The scale is designed to determine motivation for gambling behavior. The sub-dimensions of this five-factor scale developed by Lee et al. (2007) are avoidance, excitement, socialization, monetary, and amusement. According to the findings obtained from the adaptation study of the scale to Turkish culture, this five-factor model was found to be suitable for the scale. Additionally, it was determined that the gambling factors for the sub-dimensions of amusement and excitement did not differ significantly. The highest correlation value was found between the factors of excitement and amusement. Therefore, a four-factor scale model has been proposed for CONS (Arcan & Karancı, 2014). The items of the scale were scored as "I agree," "I partially disagree," and "I do not agree." The total motivation scores of the participants for gambling are determined by the score obtained from the whole scale. Considering the internal consistency coefficients of the sub-dimensions of the adaptation study of CONS, socialization internal consistency coefficient ($\alpha$ = .83), amusement/excitement internal consistency coefficient ($\alpha$ = .78), avoidance internal consistency coefficient ($\alpha$ = .90), monetary internal consistency coefficient ($\alpha$ = .87). In the same study, the internal consistency coefficient ($\alpha$ = .92) was stated for the sum of the CONS.

### Gambling Cognition Scale

The Gambling Cognition Scale was developed by Raylu and Oei (2004). This scale consists of 23 questions and 7-point Likert-type answers: "strongly disagree," "mostly disagree," "partly disagree," "neither agree nor disagree," "partly agree," "mostly agree," and "strongly agree" are given in the form. Adapted to Turkish by Arcan and Karancı (2013), this scale consists of five sub-dimensions which are "thoughts of not being able to stop gambling," "illusion of controlling," "gambling expectations," "interpretive bias," and "estimated control." All scale and sub-dimension

reliability coefficients of the scale are, respectively, .84, .78, .52, .57, .60, and .61 (Arcan & Karancı, 2013).

**Adverse Childhood Experience Turkish Form**

Adverse Childhood Experience Turkish Form, developed by Gündüz et al. (2018), was used to measure the level of negative experiences that young adults participating in the study were exposed to in childhood. CBAQ consists of ten questions and is answered as yes/no. Each item on the scale is scored as 1, the lowest possible score is 0, and the highest score is 10. An increase in the total score indicates that the level of negative experiences of young adults in childhood increases. Cronbach's internal consistency coefficient was used to measure the scale's reliability. Accordingly, Cronbach's alpha value was found to be .742.

## Statistical Analyses

The data analysis included in the research was carried out with the Statistical Program in Social Sciences (SPSS) version 25 program (IBM SPSS Corp., Armonk, NY, USA). Compliance tests of the data with normal distribution were performed and it was determined which of the parametric and non-parametric methods would be used. With the AMOS 23 package program, the Structural Equation Model (SEM) was hypothesized to perform path analysis with observed variables. The goodness of fit (GFI) and test values of the model were interpreted. The significance level was taken as 0.05.

Before starting the analysis of the data, the reliability values of the scale were checked. Reliability values were determined using Cronbach's alpha, which was obtained using the SPSS program. The coefficients were interpreted based on the recommendations of Gliem and Gliem (2003: 88). Reliability analysis was performed for each scale and the results are presented in Table 1.

The Cronbach's alpha value of the Gambling Behavior scale was calculated as 0.70; the Cronbach's alpha value of the Reason for Gambling scale was .93; the Cronbach's alpha value of the Cognitive Structures scale was .94, and the Cronbach's alpha value of the Childhood Adverse Experiences scale was .59. The Cronbach's alpha value of the Childhood Adverse Experiences scale was calculated as .29 with ten items. Items 3, 5, 6, 8, 9, and 10, which impair reliability, were removed from the analysis and recalculated, and the new Cronbach's alpha value was found to be .59. Items 3, 5, 6, 8, 9, and 10 were discarded and the analysis continued with items 1, 2, 4, and 7.

Before the regression analysis, it is necessary to check the assumptions. The first assumption is to look at whether the distribution is normal. The Shapiro – Wilk test was used to check whether the data is normally distributed or not (Alpar, 2012: 147). All of the data were distributed normally, and the analysis was performed using analysis of variance and the significance test ($t$-test) of the difference between the two means. For the variables to show multinormal distribution, "$a \times (a+2)$" formula was used where "$a$" is the number of observed variables. The value obtained from this formula should be greater than Mardia's coefficient (Mardia, 1974). When the Skewness and Kurtosis values were examined, it was seen that the variables met the $\pm 2$ limit. It was accepted that the data were normally distributed.

A questionnaire was applied to 232 participants in the study. The 17 of them were eliminated because they were below the $p < .01$ value obtained based on the Mahalanobis distance. As a result, analysis has been done with 215 questionnaires.

Table 1.
*Reliability Coefficient Coefficients of the Instruments*

| Scale | Cronbach's $a$ |
|---|---|
| Gambling behavior | .70 |
| Gambling cause | .92 |
| Cognitive structures | .94 |
| Negative childhood experiences | .59 |

## Results

The 20% (43) of the participants are from Malatya, 21.4% (46) from Elazig, 6% (13) from Antalya, 5.1% (11) from Istanbul, and 47.4% (102) are from Gaziantep provinces. While 90.2% (194) of the participants were male, 9.8% (21) were female. Marital status of 28.8% (62) was married, while 64.2% (138) were single. Around 52.1% (112) of the participants are university graduates. According to job status, 60.5% (130) of the participants work. The financial status of 47% (101) of participants is between 2.001.00 and 5.000.00 TL. Around 21.9% (47) of the participants were between the ages of 18 – 22 years, 39.1% (84) were between the ages of 23 – 27 years, and 39.1% (84) were 27 years and older.

It was found that 10.2% (22) of participants aged 9 – 13 years showed gambling behavior for the first time, while 63.3% (136) of them aged 14 – 18 years gambled. The percentages of the first betting games types were 16.7% (36) numerical lottery, 47% (101) the football pools, 0.9% (2) super lotto, 7.9% (17) super toto, 2.3% (5) lucky ball, 6% (13) horse racing, 4.2% (9) scratch card, 6.5% (14) lottery, 1.9% (4) are distributed as 10 numbers, and 6.5% (14) as other games of chance (Table 2).

The direct, indirect, or regulatory causality relationships between the variables were tested in SEM-based analyses. The causality relationship between the variables was calculated by modeling the observed variables (Figure 1).

To interpret the correlations of the analysis, we first check whether the regression coefficients on the arrows drawn between the variables are significant. The regression coefficients and significance values are shown in the following Table 3.

When Table 3 is examined, the regression coefficient between gambling behavior and negative childhood experiences is not statistically significant. Therefore, to continue the analysis, the path of this regression coefficient was deleted and the analysis was repeated.

The diagram of the tested SEM model after the path between the two scales was deleted is given below (Figure 2).

As a result of the analysis of the new tested model, to interpret the relationships, it was first checked whether the regression coefficients on the arrows drawn between the variables were

Table 2.
*Descriptive Statistics of Demographic Variables*

| Variables | Group | *f* | % |
|---|---|---|---|
| Cities | Malatya | 43 | 20 |
| | Elâzığ | 46 | 21.4 |
| | Antalya | 13 | 6 |
| | İstanbul | 11 | 5.1 |
| | Gaziantep | 102 | 47.4 |
| Gender | Male | 194 | 90.2 |
| | Female | 21 | 9.8 |
| Marital status | Married | 62 | 28.8 |
| | Single | 138 | 64.2 |
| | Divorced | 12 | 5.6 |
| | Seperated | 3 | 1.4 |
| Education level | Primary school | 5 | 2.3 |
| | Elementary school | 25 | 11.6 |
| | High school | 73 | 34 |
| | University | 112 | 52.1 |
| Job status | Not working | 27 | 12.6 |
| | Working | 130 | 60.5 |
| | Student | 58 | 27 |
| Financial status (TL) | 0 – 2000 | 47 | 21.9 |
| | 2001 – 5000 | 101 | 47 |
| | 5001 – 10,000 | 52 | 24.2 |
| | +10,000 | 15 | 7 |
| Age (years) | 18 – 22 | 47 | 21.9 |
| | 23 – 27 | 84 | 39.1 |
| | 27 above | 84 | 39.1 |
| The age she/he started betting | 9 – 13 | 22 | 10.2 |
| | 14 – 18 | 136 | 63.3 |
| | 19 and above | 57 | 26.5 |
| First betting game type | Numerical lottery | 36 | 16.7 |
| | Football pools | 101 | 47 |
| | Super lotto | 2 | 0.9 |
| | Spor toto | 17 | 7.9 |
| | Lucky ball | 5 | 2.3 |
| | Horse racing | 13 | 6 |
| | Scratch card | 9 | 4.2 |
| | Lottery | 14 | 6.5 |
| | 10 number | 4 | 1.9 |
| | Others | 14 | 6.5 |

significant.The regression coefficients and significance values are given in the table below (Table 4).

Examining Table 4, the results showed that a statistically significant effect of adverse childhood experiences was found on the reason for gambling ($\beta$ = .111; $p$ < .01) and cognitive structures ($\beta$ = .714; $p$ < .01). In addition, it was found statistically significant that gambling behavior was negatively influenced by cognitive structures ($\beta$ = –.355; $p$ < .01). The hypotheses of the research were analyzed with SEM. Since multiple normal distributions are provided in the data, the covariance matrix was created by using the maximum likelihood calculation method. The model consisting of childhood negative experiences, causes of gambling, gambling behaviors, and cognitive structures related to gambling was tested. First, we analyzed the model examining the effects of adverse childhood experiences on the causes and behavior of gambling and the effects of cognitive structures on the causes and behavior of gambling. Goodness of fit index values obtained as a result of the analysis were found as $\chi^2$ = 5.482, $sd^2$, $\chi^2/df$ = 2.741, root mean square error of approximation (RMSEA) = .090, GFI = .987, and comparative fit index (CFI) = .982 (Table 5) (Özdamar, 2016). However, the regression coefficient between gambling behavior and negative childhood experiences was not statistically significant. Therefore, to continue the analysis, the path of this regression coefficient was deleted and the analysis was repeated.

According to the questions created for the research due to the analysis, "the effect of negative childhood experiences on gambling behavior in young adults" was not found statistically significant. The effect of adverse childhood experiences on individuals' gambling behavior was found to be statistically insignificant ($p$ < .05). As a result of the analysis, the effect of cognitive structures related to gambling on gambling behavior in young adult individuals was found to be statistically significant. Cognitive reasons negatively affect gambling behavior ($\beta$ = –.355; $p$ < .01). The effect of negative childhood experiences on the causes of gambling in young adults was found to be statistically significant. The causes of gambling are positively influenced by negative childhood experiences ($\beta$ = .111; $p$ < .01). The influence of cognitive structures related to gambling on the causes of gambling in young adults was found to be statistically significant. Cognitive structures related to gambling have a positive effect on gambling behavior ($\beta$ = .714; $p$ < .01). Cognitive constructs explained 13% of the variation (variance, R2) in the causes of gambling. Negative childhood experiences and cognitive structures explained 52% of the variation (variance, R2) in the causes of gambling. In the tested model which is the effects of negative childhood experiences on the causes of gambling, the effects of cognitive structures on the causes of gambling and gambling behaviors were investigated. The GFI index values obtained as a result of the analysis were found as $\chi^2$ = 5.744, $df$ = 3, $\chi^2/df$ = 1.915, RMSEA = .060, GFI = .987, and CFI = .986 (Table 5).

When Table 5 was examined, the model was found to be statistically significant and the calculated $\chi^2/df$ value was below 3. In addition, NFI, CFI, and GFI values suggested an acceptable

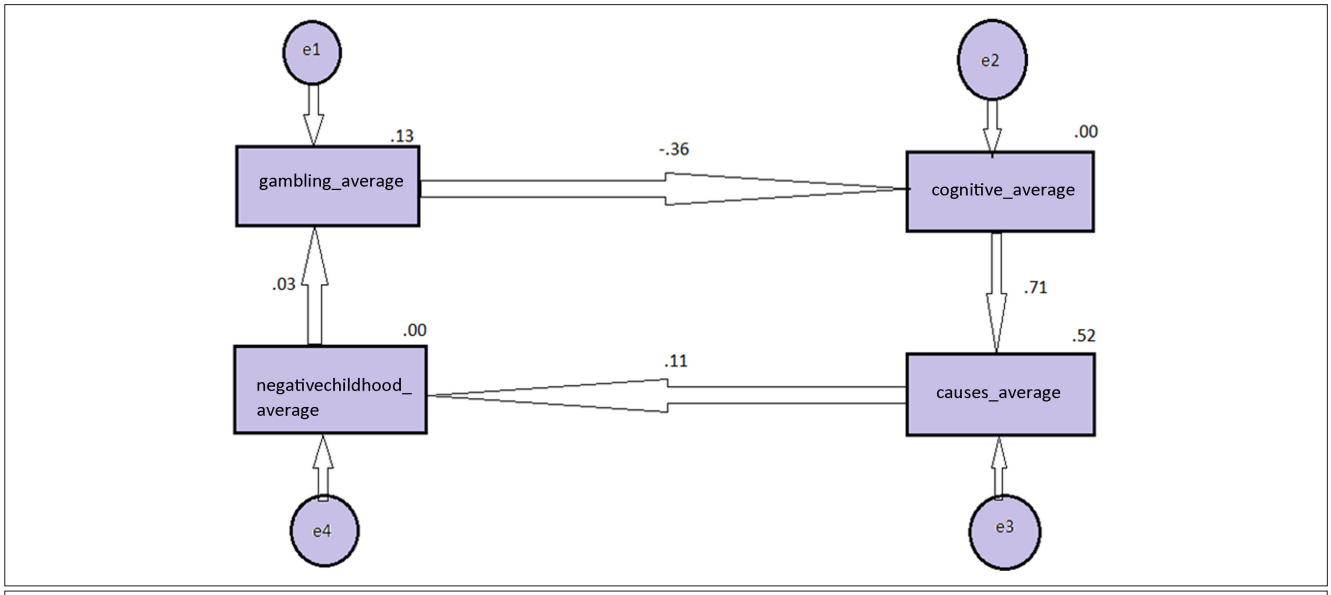


Figure 1. The results SEM Model Diagram 1.

Table 3.
*Relationship Coefficients between Scales*

| Scale 1 | Scale 2 | Coefficients ($\beta$) | $p$ |
|---|---|---|---|
| Gambling cause | Negative childhood experiences | .111 | .01* |
| Gambling cause | Cognitive structures | .714 | .00* |
| Gambling behavior | Cognitive structures | −.358 | .00* |
| Gambling behavior | Negative childhood experiences | .033 | .60 |

Note: *$p < .05$.

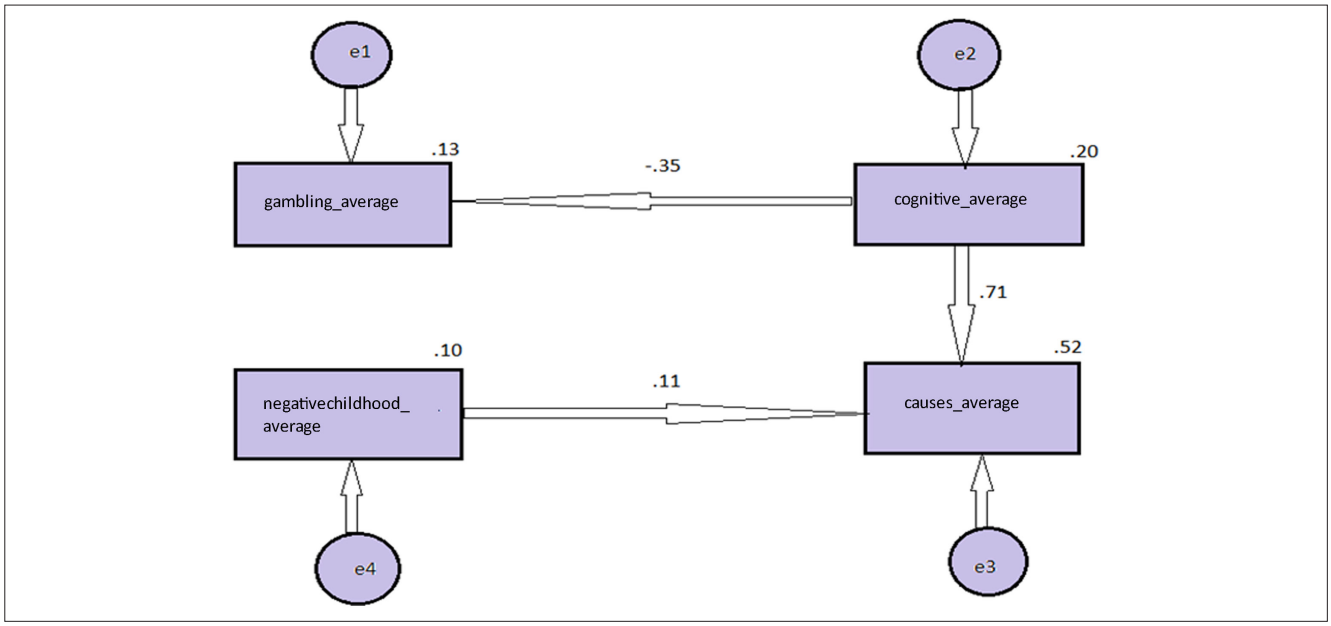


Figure 2. The results of SEM Model Diagram 2.

level of fit (NFI > .90, CFI > .90, and GFI > .90). This result implies that the tested model fits at an acceptable level. Finally, the RMESA value provided further evidence for the model's fit (RMSEA < .08).

## Discussion

Gambling behavior can turn into problematic behavior and interfere with family and social life and become a serious problem.

Table 4.
*Relationship Coefficients between Scales*

| Scale 1 | Scale 2 | Coefficients ($\beta$) | $p$ |
|---|---|---|---|
| Gambling cause | Negative childhood experiences | .111 | .01* |
| Gambling cause | Cognitive structures | .714 | .00* |
| Gambling behavior | Cognitive structures | –.355 | .00* |

Note: *$p < .05$.

Table 5.
*Goodness of Fit Indices Values for CFA*

| Fit Index | 1. Model | 2. Model | Good Fit | Acceptable Fit | Explanation (2, For Model) |
|---|---|---|---|---|---|
| CMIN | 5.482 | 5.744 | The model with the smallest value is more compatible | | The $\chi^2$ test examines whether the variance – covariance matrices (between the model variables) exhibit similarity. The covariance structure observed in the model and the covariance structure determined by the model agree. "Statistically, the model was found to be fit." |
| Sd | 2 | 3 | - | | |
| $\chi^2$/sd | 2.471 | 1.915 | ≤3 | 3 – 5 | The low output indicates that the matrix structures are similar. It is sensitive to sample size. If the number of samples increases, $\chi^2$ decreases. For $\chi^2$/sd value, since it is less than 3, statistically the model fits the data well. The value obtained from the model was found to be statistically significant. The calculated value is in the desired range. |
| GFI | .987 | .987 | ≥.95 | .90 – .95 | It was developed as an alternative to the $\chi^2$ value and does not include sample size in evaluating model fit. It is accepted as the sample variance explained by the model. Statistically, it has been calculated that the model measures the covariance matrix in the sample at a low rate. The value obtained from the model was not found statistically significant, the calculated value is not in the desired range. |
| CFI | .982 | .986 | ≥.97 | .95 – .97 | When calculating the index. the sample size is included in the calculations. It is calculated by comparing the covariance matrix of the independence model, where there is no relationship between the latent (implicit) variables, with the covariance matrix of the proposed structural equation model. The value obtained from the model was found to be statistically significant. |
| RMSEA | .090 | .060 | ≤.05 | .05 – .08 | Due to its sensitivity to the number of samples, it may cause the rejection of a model that will actually be accepted in models with small samples. Therefore, it is not recommended to be used in studies with small samples. The value obtained from the model was found to be statistically significant. It can be stated that the number of samples used is sufficient to explain the model. |

CFA = confirmatory factor analysis; RMSEA = root mean square error of approximation; GFI = goodness of fit; CFI = comparative fit index; sd = standard deviation.
Reference: Özdamar, K. (2016). Scale and test development structural equation modeling. Eskisehir: Nisan Bookstore.

In connection with this disorder, various psychopathologies may appear in the life of the affected person. Financial losses often occur, which inevitably lead to the behavior being classified as criminal and becoming an individual/societal threat (Güriz et al., 2012). Thus, the prevalence of gambling behavior and its transformation into addiction have increased the need for studies to illuminate this issue as well as the fact that it has become a public health problem that concerns the whole society.

Therefore, priority should be given to the development of gambling prevention studies. Although the first step of prevention studies is to identify the problem and identify at-risk groups, there are few studies in Turkey to understand gambling behavior and its causes. In this regard, the study is expected to make a significant contribution to this field. The data obtained in the research is on whether the gambling experiences of young adults are confirmed according to the current model. In the current SEM, it was found statistically significant that the causes of gambling were positively affected by childhood negative behaviors and cognitive structures. In addition, it was found statistically significant that gambling behavior was negatively affected by cognitive structures. The effect of childhood negative experiences on individuals' gambling behaviors was found to be statistically insignificant.

In a model development study conducted with 197 irregular gamblers to explain individual differences in gamblers, the literature highlighted the positive effect of cognitive models and emotion regulation on the causes of gambling. From the past to the present, cognitive structures and emotion regulation skills have been shown to affect gambling-related evaluations and justifications (Jara-Rizzo et al., 2019). However, another study accepted the positive effect of poor psychological health from childhood on the causes of gambling. It has also been stated that this situation predicts stronger cognitive distortions (Navas et al., 2016). In another study parallel to the current study, it was stated that individuals who stated that they had emotional difficulties in the past showed more similar results and more specifically cognitive distortions related to gambling (Ciccarelli et al., 2020).

When the hypothesized SEM model was examined in more detail, it was seen that the gambling behavior was negatively affected by the cognitive structures related to gambling. The literature has stated that gambling is often accompanied by a series of irrational cognitions. Differences in these cognitive structures were associated with individual differences in gambling behavior such as severity, frequency, problematic gambling, and loss. Specific differences in one's cognitive styles have been a negatively important factor in the development of gambling behavior (Armstrong et al., 2020). In other words, having more erroneous cognitions about gambling may cause more gambling behavior and problems. In another supportive study, 259 male gambling addicts were compared in many ways. As a result, it has been shown that cognitive distortions of these people are a good distinguishing factor in terms of the severity of their gambling behavior (Mathieu et al., 2018). Considering the current study results, it can be said that the severity of the deterioration in cognitive structures related to gambling has a determining feature on gambling behavior.

This study also determined that the effect of negative childhood experiences on individuals' gambling behaviors was insignificant. The current study expected that gambling behavior would be negatively affected by negative childhood experiences. Studies in the literature show similarities with these results in different aspects. Studies have shown that child maltreatment is an important risk factor. In addition to other psychological disorders and accompanying addictive behaviors, an assessment of childhood trauma was recorded in individuals presenting with a gambling disorder. However, it has been stated that the effect of these traumas on gambling behavior may be in the form of determining the gambling severity rather than being direct. The low childhood trauma scores of the groups defined as social gamblers support these results (Felsher et al., 2010).

In another study supporting the research, Hodgins et al. (2010) examined the relationship between childhood maltreatment and gambling problems. They reported that individuals with gambling problems were more likely to be exposed to childhood maltreatment than individuals without gambling problems. It predicted the severity of gambling problems and gambling frequency, even when controlling other individuals and social factors, including childhood maltreatment, alcohol and other drug use disorders, family environment, psychological distress, and antisocial disorder symptoms. However, in the current study, the diversity of negative childhood experiences on gambling behavior is striking.

In another study, genetic, familial, or environmental factors and childhood trauma were found to be the sole determinants of pathological gambling behavior. The effect of exposure to traumatic events in childhood or throughout life on levels of gambling was demonstrated in one study (Scherrer et al., 2007). The results of the current study are consistent with the findings of previous studies. As a result, in this study, the reasons for gambling were found to differ significantly between men and women. Men were more likely to gamble due to amusement/excitement and avoidance than women. Cognitive structures related to gambling were found to differ by gender. In the interpretive bias and predictive control subscales, mean scores were higher in men than in women. No gender differences were found in gambling behavior and adverse childhood experiences. It was found statistically significant that the reason for gambling in young adults was positively affected by negative childhood experiences and cognitive structures. In addition, it was found statistically significant that gambling behavior was negatively affected by cognitive structures. The effect of childhood negative experiences on individuals' gambling behaviors was found to be statistically insignificant.

Gambling behavior is negatively affected by cognitive reasons. "The effect of negative childhood experiences on the causes of gambling in young adults" was found to be statistically significant. The reasons for gambling are positively affected by negative childhood experiences. "The effect of cognitive structures related to gambling on the causes of gambling in young adult individuals" was found to be statistically significant. Cognitive structures related to gambling positively affect the reasons for gambling. Cognitive structures explain 13% of the variation in reasons for gambling, and negative childhood experiences and cognitive structures explain 52% of the variation in the causes of gambling.

## Limitations and Directions/Suggestions for Future Research

If the sample had been larger and different provinces had been included in the study, this study probably could have provided more valid and reliable results. Increasing the number of data or changing the sample could be more beneficial for high reliability. It is recommended that the sociodemographic data be more specified. The presence of these variables seems to be more important and directional for intervention programs. It has been found that field studies in the literature are very limited. Therefore, it is suggested to conduct studies on gambling behavior. The existence of other important variables that may affect gambling behavior should also be considered and be investigated further.

Gambling behavior has been considered in recent years as a factor affecting people of all ages and threatening public health. The increasing prevalence of this behavior and the fact that it is becoming more complicated with the use of technology suggest that this situation will be a problem for people's quality of life. Understanding gambling behavior therefore provides us with the opportunity to identify its effects and risk factors. Prevention initiatives should therefore consider what can be done in terms of screening and early intervention before addiction develops.

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