



#### **Open Access** Original Research

# COVID-19 and the Suspension, Relapse and Continuation of Casino Gambling: Learning Theories at Work

Albino Roshan Thomson, PhD<sup>1,3\*</sup>, Nandakumar Mekoth, PhD<sup>2,4</sup>

Citation: Thomson, A.R., Mekoth, N. (2023). COVID-19 and the Suspension, Relapse and Continuation of Casino Gambling: Learning Theories at Work. Journal of Gambling Issues.

Editor-in-Chief: Nigel Turner, PhD

ISSN: 1910-7595

**Received:** 08/13/2022 **Accepted:** 02/14/2023 **Published:** 02/20/2023



Copyright: ©2023 Thomson, A.R., Mekoth, N. Licensee CDS Press, Toronto, Canada. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons. org/licenses/by/4.0/) <sup>1</sup>Goa University, Goa https://orcid.org/0000-0002-7365-2099 <sup>2</sup>Goa Institute of Management, Goa https://orcid.org/0000-0002-2178-804X <sup>3</sup>ORCiD: 0000-0002-7365-2099 <sup>4</sup>ORCiD: 0000-0002-2178-804X \*Corresponding author: Albino Roshan Thomson, <u>albinothomson@gmail.com</u>

Abstract: Casinos worldwide closed during COVID-19, forcing millions of gamblers to stop casino gambling temporarily or to migrate to online gambling platforms. Many returned to casino gambling once the casinos reopened. Using the qualitative method, this paper examines the return of gamblers to casinos through the lens of the learning theory of addiction. Addicted gamblers were forced to leave gambling owing to the closure of casinos. Though many gamblers found coping difficult, they saved money, experienced financial stability, and paid attention to family and work. Yet they became restless and returned when casinos reopened. Recovery was the main motive to return and continue gambling for those in heavy debt. Though gamblers were aware that regular gamblers never make money, they were happy to gamble again when casinos reopened and experienced satisfaction. This research supports learning theories, indicating that several social and psychological factors influence the suspension, relapse and continuation of gambling. Relapse and continuation are explained by operant conditioning, a system of rewards and punishments, and classical conditioning, which pairs the pleasure of activities with environmental cues leading to addiction. Based on qualitative interviews, this paper hypothesizes the reasons for the relapse and continuation of gambling through learning theories. The study established the significance of classical conditioning theory in explaining addictive behavior. While the results supported the role of reinforcement on adherence to gambling, no major shift to online gambling during lockdown was noticed. The paper also develops a testable model based on qualitative analysis of data.

Keywords: Casino Gambling; Learning Theory of Addiction, COVID-19, Suspension, Relapse.

### Introduction

Casino tourism (CAT) significantly contributes to the local and national economies (But and Ap, 2017). Casino gambling is also proven to improve residents' quality of life in two ways; by extending the recreational options available to the residents and also by increasing job opportunities and income generated from casinos (Andriotis & Vaughan, 2003; Gursoy & Rutherford, 2004; Ham et al., 2004; Deery et al., 2012). Increasing affluence and seeking of the pleasure of tourists has led to the phenomenal growth of this industry. Tourists on vacation want to experience the entertainment the gambling establishments offer, especially those tourists from countries where gambling is completely banned. There are opposing views regarding the desirability of casinos (Lee et al., 2020). While the government, local authorities, and entertainment companies support gambling for its financial benefits, many social organizations criticize gambling for its evil effects, like addiction and increased crime (Nichols and Tosun, 2017).

The impacts of the COVID-19 pandemic are significant in all fields of life and all across the world. Since the beginning of the pandemic, authorities and gambling houses have been concerned about the impact of the pandemic on gambling. The impact of the pandemic on gambling is rambling. The onset of the COVID-19 pandemic has resulted in lockdowns worldwide, temporary closure of casinos and short-term suspension of gambling by many. While some of these gamblers continued the suspension, some switched to online gambling (Davies, 2020), raising a major concern since online gambling is considered a high-risk game (Gainsbury et al., 2015; Hing et al., 2015). After the easing down of the pandemic, some continued suspension, some remained online, while most resumed casino gambling.

Only a small amount of literature is currently available on COVID-19 and gambling, and it is still uncertain how the COVID-19 pandemic may affect gambling behavior and gambling problems. To further understand the impact of the pandemic on gambling, more study is required, including qualitative and mixed methods studies (Brodeur et al., 2021). The need for understanding the experience of gamblers during the epidemic and the inadequacy of published qualitative or mixed investigations has also been noted by Auer et al. (2020). Furthermore, Donati et al. (2021) observed the dearth of literature on COVID-19 and gambling. They pointed out the need to examine how the COVID-19 pandemic may affect people's gambling habits and how gamblers may react to the reopening of casinos.

The main focus of this study is to fill the gaps mentioned earlier by analyzing the impact of COVID-19 on gamblers and their reaction to the reopening of casinos using a qualitative approach and learning theory framework. Gamblers with addictions believed that nothing could stop them from playing. They had to stop gambling due to the pandemic, which caused casinos to close (Kalke et al., 2022). Even though many gamblers struggled to cope (Biddle, 2020; Georgiadou et al., 2022), many saved money and achieved financial stability. When they were not gambling, they focused on their families and jobs, but when casinos reopened, they felt restless and started playing again. Many gamblers were heavily indebted and spent their whole income on gambling. The primary motive behind the comeback and ongoing gambling was recovery. Gamblers were thrilled to be able to gamble again when casinos reopened, even though they were aware that regular gamblers seldom won money. This study aligns with learning theories and establishes the role of various social and psychological factors in the decision to stop, pick up again, and keep gambling. While observational and reinforcement learning processes lead to the formation and continuation of behavior operant conditioning, which uses rewards and penalties, and classical conditioning, which links the enjoyment of activities with environmental cues, are learned to cause addiction. These components of the learning theory provide explanations for gambling behavior, relapse and persistence. This research uses learning theories to hypothesize the causes of the relapse and continued gambling based on qualitative interviews.

The main objectives of this research are:

- 1. To analyze the impact of COVID-19 on gamblers and their reaction to the reopening of casinos using a qualitative approach and learning theory framework.
- 2. To explore the role of social and psychological factors in the decision to stop, pick up again, and keep gambling.

## **Theoretical Background**

A growing body of literature has begun to stress the importance of integrating major theoretical explanations of gambling to develop a better understanding of the underlying mechanism of deviant behavior. It has been found that theories of learning have been at work in addition to addiction theory and risk theory, which are considered distinct traditional theories of gambling. Gambling requires a distinctive skill set normally obtained through personal interactions and experiences and not normally possessed by all (Skinner and Fream, 1997). Gambling is s learned behavior rather than innate behavior; hence, it is imperative to explore learning theories in understanding gambling behavior.

## **Social Learning Theory**

Researchers have confirmed the relationship between the SLT of Bandura (1978) and deviant behavior (Hinduja and Ingram, 2009; Holt et al., 2010; Smallridge, 2012). As mentioned, the specific skill set required for gambling is not normally possessed but acquired through differential association. This differential association is a component of SLT; hence, social learning theory can be applied to studying gambling behavior. Moreover, Social Learning Theory remains among the most empirically supported explanations for involvement in traditional deviance like crime and gambling (Hwang and Akers, 2003).

The social learning theory suggests that users' behaviors are determined by two structurally different social learning processes: observational learning and reinforcement learning. The theory revolves around the concept of conditioning for behavior formation and addiction. The conditioning concept divides environmental stimuli leading to behavior formation into classical and operant conditioning. The coming sessions further explain various concepts associated with the learning theory.

## **Observational Learning**

Behavior change regulated by direct and indirect interaction with people is known as observational learning (Cheung et al., 2015). Individuals tend to develop particular behavior in a social environment in which other people expose them to the said behavior (Lowry et al., 2016). This is more applicable in the case of deviant behavior, where individuals learn these behaviors from deviant peers without rational and deliberate information processing. This is applicable in the case of gambling too.

## **Reinforcement Learning**

Reinforcement learning refers to the probability of rewards and punishments associated with deviant behaviors (Lam et al., 2010). Deviant behaviors are strengthened through rewards which act as positive reinforcements (Lee et al., 2014). Obtaining rewards and avoiding punishments are considered behavior-shaping mechanisms in reinforcement learning. Amount, frequency, and probability of reward lead to the retention of deviant behavior. Occasional wins at the casinos reinforced gambling behavior and continued gambling, hoping for more wins.

# **Classical Conditioning Theory**

Classical conditioning is based on a stimulus eliciting a behavior. Here the stimulus occurs before the behavior. For gamblers, these stimuli could be SMS from the casinos, print or electronic media advertisements, discussions or peer mentions, etc. Since gambling is a learned behavior, stimuli at various stages have been found to draw people towards gambling.

# **Operant Conditioning Theory**

Operant conditioning is an associative learning process through which the strength of a behavior is modified by reinforcement or punishment. According to Homans, the founder of behavioral sociology, human behavior is more operant; hence, operant conditioning is more suitable for studying social behavior (Homans, 1974). Gamblers receive quick rewards with little risk in the form of wins which will serve as positive reinforcement leading to operant conditioning and addiction. According to Hinduja and Ingram (2008), rewards serve as differential behaviour reinforcement, leading to addiction.

## Methods

While there is literature on the impact of the pandemic on gambling, there is very little about how gamblers experience lapse, relapse, and suspension. This study aims to bridge this gap by using the qualitative research method to understand these experiences comprehensively. Qualitative research aims to collect high-quality, meaningful data from a small number of respondents who are most qualified to respond to the study topic (Patton, 2014). Participants' reactions frequently result in the generation of a vast amount of data.

Our research explains the entire process of closure, lapse, and relapse through learning theories based on qualitative research conducted among gamblers. Higgins and Makin (2004) suggest using theories to explain behavior and employ traditional theories on the behavior of individuals associated with cybercrime. Traditional behavior theories are necessary to determine whether the same concepts can explain suspension and relapse. Social Learning Theory (SLT) is a comprehensive theory of deviant behavior that is most extensively examined and empirically verified (Verrill, 2008; Warr, 2002) and is also known to develop a qualitative literature base (Bachmann, 2010).

The phenomenological research approach, a prevailing qualitative method, seeks to understand and describe the essence of a phenomenon. This approach explores the everyday experiences of human beings while suspending the researchers' preconceived assumptions about the phenomenon. The concept of "lived experience" was coined in phenomenology to explain how an individual perceives and interprets the world as real and significant within their particular environment. By investigating participant descriptions, phenomenological research strives to understand and capture the phenomenon's meaning deeply on a fundamental level. This method depends upon face-to-face interviews to obtain rich firstperson accounts of experience but can also be obtained in other ways like online interviews.

The descriptive phenomenological method of Giorgi (1985) and Colaizzi (1978) is considered the best-known phenomenological method. A descriptive phenomenological study "unveils" a specific experience in its entirety, with "nothing is taken away, and nothing added" (Wertz,2011). Colaizzi's method of data analysis emphasizes the description of the "lived experience" over the explanation, i.e., studying the "lived experiences" through phenomenology. Newstrom (2002) describes this method as truthful in describing a phenomenon and not creating ideas or explanations regarding it, resulting in thorough explanations of 'what an experience is' for those who experience it (Giorgi, 2008). Also, this method is especially valuable in areas with little existing research (Morrow et al., 2015) and has considerable potential for qualitative researchers, especially those coming fresh to phenomenology. Descriptive phenomenology was deemed appropriate for this study because it aimed to analyze gambling from the perspective of those experiencing it to understand its essential structure. This study used telephonic interviews to gather the experience of gamblers.

## **Study Setting**

This study was conducted among gamblers who visited land-based casinos regularly for gambling. The frequency of visits was set as a minimum of five times per week.

## **Participants and Recruitment**

It has previously been recommended that qualitative studies require a minimum sample size of at least 12 to reach data saturation (Clarke and Braun, 2013; Fugard and Potts, 2015). However, the number of participants depends on the qualitative research approach. According to Levitt et al. (2018), Narrative includes 1-2, phenomenology includes 3-10, and grounded theory includes 20-30. While Morse (1994) recommends a minimum of six informants for phenomenological research, Creswell and Poth (2016) suggested 5-25 participants for the phenomenological study.

In a phenomenological study, careful determination of criteria for identifying potential participants with significant experiences of the phenomenon is necessary. Participants must be able to reflect and provide full and sensitive descriptions of their lived experiences to ensure they have substantial experiences of the phenomenon (Cilesiz, 2011).

A purposeful sampling technique was used to identify ten gamblers who had direct personal experience with the phenomena of interest and were willing to share their experiences. Participants needed to meet the following inclusion criteria to be eligible for the study: 1) Respondents were required to visit casinos a minimum of five times per week; 2) Respondents needed to be gambling before the pandemic; 3) They needed to be willing to participate in the study and share their experience. The study was based on unstructured individual interviews, which yielded a wealth of data. Inclusion criteria were set to capture experience from those with greater experience and addiction to gambling. Participants consisted of four females and six males whose ages ranged from 28 to 58 years, with a mean age of 43.3. Their experience in gambling ranged from 5 to 30 years, with a mean of 14.3 years of gambling history. While 50% of female respondents were homemakers, the rest worked in the private sector. Among the male respondents, four were business people, and the rest two were employed. Demographic data of the participants are provided in Table 1

| Participant | Gender | Age(yrs) | Gambling         | Profession |
|-------------|--------|----------|------------------|------------|
|             |        |          | Experience (yrs) |            |
| 1           | F      | 28       | 8                | Employed   |
| 2           | М      | 32       | 5                | Business   |
| 3           | F      | 45       | 9                | Employed   |
| 4           | F      | 38       | 20               | Homemaker  |
| 5           | М      | 48       | 7                | Business   |
| 6           | М      | 58       | 10               | Business   |
| 7           | М      | 50       | 25               | Employed   |
| 8           | М      | 42       | 15               | Business   |
| 9           | F      | 56       | 30               | Homemaker  |
| 10          | М      | 36       | 14               | Employed   |

# Table 1. Demographic Data of Participants

# **Data Collection**

Comprehensive semi-structured interviews were carried out between May 2022 to June 2022. "Do you still visit casinos" was the opening question of the interview, which invited the participant to describe a personal experience. The interviewer (second author), who provided questions, prompted the respondents to explain their experiences further. Each interview was conducted in a setting away from the casinos and lasted between 40 and 60 minutes. With the participant's permission, interviews were electronically audio recorded and subsequently verbatim transcribed. Data was accumulated until no more new information was found, which suggested that data saturation had been reached.

# **Data Analysis**

Colaizzi's (1978) distinctive seven-stage process, illustrated in Table 2, provides a better understanding of the rigorous analysis performed by the researchers.

| Stage                                   | Description   |
|---|---|
| 1. Familiarization                      | Read and re-read all the transcripts to acquire a   |
|   | feeling of familiarization.                         |
| 2. Identifying significant statements   | The researcher identifies all statements or         |
|   | phrases in the transcripts directly on the research |
|   | phenomenon.   |
| 3. Formulating meanings                 | Formulated meanings are constructed from the        |
|   | significant statements.                             |
| 4. Clustering themes                    | Formulated meanings are clustered into              |
|   | identified themes that are common.                  |
| 5. Developing an exhaustive description | The researcher writes a detailed, exhaustive        |
|   | description of the phenomenon, incorporating all    |
|   | the themes in step 4.                               |
| 6. Producing the fundamental structure  | The researcher condenses the detailed               |
|   | description down to a short, dense statement.       |
| 7. Seeking verification of the          | The researcher returns the fundamental structure    |
| fundamental structure                   | statement to all participants or sometimes a sub-   |
|   | sample to ask whether it captures their             |
|   | experience.   |

# Table 2. Stages in Colaizzi's Descriptive Phenomenological Method

# **Stage 1: Familiarization**

The researchers conducted each interview personally, leading to a better understanding of the respondents' experience. It is important to read

the narratives (Colaizzi,1978) and listen to the recording several times (Haase and Myers, 1988) to understand the participants' experience at the Familiarization stage.

To understand each participant's experience, the researchers initially listened to the recorded interviews two times separately and then listened to the same together. The researchers listened to the interviews for the last time individually, and transcripts were written out jointly. The researchers read the transcripts several times to assist in the bracketing and reflective process. A copy of the transcripts was sent to the participants, who affirmed that the transcripts represented what was communicated during the interview.

## **Stage 2: Identifying Significant Statements**

At this stage, the researchers read and re-read the transcripts to identify the gamblers' experiences. Gamblers mentioned the role of observational learning, reinforcement learning, operant conditioning and classical conditioning in gambling behavior, relapse and continuation of gambling. Significant phrases and statements were highlighted on each page of the transcripts to pay more attention to them and analyze the iteration. Each statement was then cut from the transcript and pasted onto a separate sheet marking the page and line number. This helped re-read the transcripts with a new sense of openness to the data and identify early themes emerging in the data. From the ten transcripts, 32 significant statements were extracted.

Researchers manually analyzed the significant statements, which helped continue immersion in the data. Thoughts and feelings that arose during this stage were jotted down in the reflective diary and later utilized in describing how interpretive decisions were made.

## **Stage 3: Formulating Meanings**

In this stage, more general statements were formulated. Researchers formulated meaning for each significant statement extracted. Each significant statement relating to the description and experience was studied carefully to determine its meaning. The fundamental questions asked here were "What did the gambler feel at the sudden closure of casinos?", "How did they cope with it?" and "What did they feel when the casinos reopened, and how did they react to it?". It is important to consider the statements preceding and following the significant statement to ensure the contextual meaning is correct (Haase and Myers, 1988). Being conscious of the same, formulated meanings were developed by the researchers. The formulated meanings indicated various components of learning theory. Reinforcements in the form of wins (operant conditioning) and cues like SMS from the casinos and calls from friends (classical conditioning) were mentioned by gamblers. Since the respondents were not probed about the initial gambling stages, statements did not indicate observational learning. Examples of formulated meanings from interview excerpts are given in Table 3 below.

| Significant Statements   | Formulated Meanings |
|--|---------------------|
| Something was missing; every day, I used to go gambling. When      | Missing             |
| the casinos closed, I did not know what to do.                     |                     |
| I used to enjoy gambling so much that something was not there or   | Lacking             |
| was lacking in my daily life.                                      |                     |
| I was no more able to experience the thrill of gaming. I was       | Craving             |
| craving the excitement of casino gambling.                         |                     |
| I was spending more time with my children and could also attend    | Relief              |
| to my family.  |                     |
| When I was gambling, I didn't have any money in my pocket; now,    | Financial Freedom   |
| I realize I have a lot of money.                                   |                     |
| You know how it is; I am addicted. It is difficult to live without | Restlessness        |
| gambling.  |                     |
| I have lost so much money, and I somehow want to recover.          | Recovery Motive     |
| When you go to the casino, they give you immediate cash, and       | Uncertainty         |
| your winning is accounted for in terms of chips; these things are  |                     |
| not there online.  |                     |
| We don't know whether they will credit our money; we are not       | Risk                |
| dealing with people with flesh and blood.                          |                     |
| When I saw the news that the casinos reopened, I could not resist  | Stimulus            |
| returning.   |                     |

# **Table 3: Process of Creating Formulated Meanings from Significant Statements**

| You can win, and sometimes you win. I think my numbers will     | Reinforcement        |
|---|----------------------|
| continuously fall one day, so I will win.                       |                      |
| I lost so much, at least half of which I should recover.        | Recovery Motive      |
| I would have left gambling long back if I was only losing.      | Reinforcement        |
| Helping my wife with daily chores and gardening made us much    | Positive alternative |
| closer to each other.   |                      |
| The pandemic and the closure of casinos opened my eyes to what  | Repentance           |
| I was missing by staying away from the love and laughter of my  |                      |
| kids, and I will never waste my time and money on gambling.     |                      |
| I have received an SMS from online gambling sites reminding me  | Reminding            |
| of the thrill of gambling.                                      |                      |
| A friend was discussing online gambling possibilities, so I got | Luring               |
| lured to the activity.  |                      |
| Winning occasionally reinforced their expectation of winning.   | Reinforcement        |
| My colleague with whom I used to go gambling invited me back    | Adoption             |
| to gambling, and I couldn't resist                              |                      |

# **Stage 4: Clustering Themes**

Once meanings were formulated for all the significant statements extracted, they were arranged into clusters of themes. Thirty-two significant statements were arranged into 12 theme clusters, then collapsed into seven themes of experiences at different gambling stages. The final themes were common to all participants' descriptions of their experiences.

# Stage 5: Develop an Exhaustive Description

Integrating all the resulting ideas into a detailed description of the phenomenon is important. This was done by incorporating the emergent themes, theme clusters, and formulated meanings into the description to create its overall structure and ensure that it contained all of the elements of the experience.

## Stage 6: Producing the fundamental structure

At this stage, the detailed description is reduced to an essential structure. The "lived experience" of gamblers is derived from their personal experience at various stages of gambling before the pandemic and during the closure and reopening of casinos. Gamblers mentioned the role of reinforcement in luring them to gambling before the pandemic and during the reopening of casinos; this was further enhanced through classical conditioning. The gamblers' perception of gambling has been contemplated during the closure of casinos and depends on how the gamblers spend the closure stage. Their perceptions are framed by the activities they are involved in during the closure and through the relationships with family and friends during the closure period. It is a dynamic trait of the individual that evolves with life events, making them susceptible to growth and both present and future change. Significant others, risk perception, and gambling motives proved to frame the gamblers' perception of gambling harm or benefits (positive and negative reinforcements), which led to the cessation or continuation of gambling. Addiction or loss of control also played a vital role in luring gamblers back to casinos.

## Stage 7: Seeking Verification of the Fundamental Structure

To confirm that the phenomenon accurately captures the participants' experiences, the participants should be contacted again for a second interview at the end of the data processing process. Debriefing was done on each respondent, and they acknowledged that what they read corresponded to their gambling experiences at various stages.

# Gambling in the Context of the Pandemic

All the countries worldwide implemented restrictions to decrease the spread of COVID-19 once the World Health Organization (WHO) declared it a pandemic. Most countries implemented lockdowns, including closing public facilities, educational institutions, leisure houses, and hotels, closing borders and banning travel. Not essential individual movements were prohibited due to quarantine. All these measures were implemented to curtail social contact and thus curb the virus's spread. Casinos worldwide had to close and were not allowed to receive customers. While the population was oblivious to the future, most addicted gamblers faced higher levels of anxiety, stress and frustration, similar to substance addicts (Volkow, 2020; Ettman et al., 2020). The feelings of worry and anxiety contributed to the development of mental disorders in many and the change in addictive behaviors (Pieh et al., 2020; Schwinger et al., 2020). During the temporary closure of casinos, addicted gamblers were forced to suspend gambling activities or shift to online gambling. This indicates the existence

of two divergent groups; the first group of gamblers who completely suspended gambling and the second group who shifted to online gambling.

## 1. Suspension

When gamblers were forced to suspend gambling, the initial suspension led to mixed feelings of missing and relief. Conditions such as craving, anxiety, depression, and substance use disorder are common among frequent gamblers (Brodeur et al., 2021). The unexpected closure of casinos during the pandemic has led to an increase in these conditions (Rajkumar, 2020; Czegledy, 2020; Hunt et al., 2020; Sharman et al., 2021; Sharman, 2022; Turner, 2020; Wardle, 2020; Ng Yuen and Bursby, 2020). Participants of this study also reported having experienced similar emotions of lacking, missing, or craving. People who were used to gambling reported an initial feeling of missing something. One of the respondents said that "something was missing; every day I used to go gambling. When the casinos closed, I did not know what to do", another respondent added. "I used to enjoy gambling so much so that something was not there or something was lacking from my daily life was the comment by yet another respondent. Gambling used to fill a lot of time in my life". Boredom is associated with problem gambling (Mercer and Eastwood, 2010). Respondents of a study conducted by Donati et al. (2021) also claimed to have negative feelings about not gambling, which they expressed in terms such as tired, bored, and sad. A third respondent said, "I was no more able to experience the thrill of gaming. I was craving the excitement of casino gambling".

Soon many of them realized that they were better off in many ways. One respondent said, "I was spending more time with my children and could also attend to my family". Another respondent said, "when I was gambling, I didn't have any money in my pocket; now I realize I have a lot of money". Another respondent said she was able to pay back her debts. The improved quality of life experienced by the gamblers acted as negative reinforcement leading to classical conditioning and suspending gambling behavior. Classical conditioning theory speaks of positive and negative reinforcements leading to or drifting from various behaviors. The study of Donati et al. (2021) also found around half of the respondents had a better positive state of mind after the cessation of gambling, which they captured in words like 'well, better, happy, serene, calm' etc. Gamblers also experienced a sense of freedom and improved relationships with family, and a few of them also started with new interests like gardening, reading, etc. In conclusion, forced gambling cessation and family members' presence appear to improve gamblers' quality of life.

# 2. Online Gambling

The major impact of the pandemic on gambling was the closure of casinos because of the restrictions imposed by government and health authorities, like social distancing and lockdowns (Griffiths et al., 2020; King et al., 2020). Gamblers were expected to shift to online casinos to

compensate for the excitement and thrill of gambling (Xuereb et al., 2021; Price, 2020). People who missed casino gambling turned to online gambling (Brown and Hickman, 2020). One of the gamblers said that he was feeling restless. He said one of his friends introduced him to online gambling. Although they felt that the social and physical surroundings of the casinos were missing, online gambling was a reasonable substitute for casinos. One of them said, "you know how it is; I am addicted. It is difficult to live without gambling". According to Roberta Pacifici's report on National Center for Addiction and Doping, ISS on 23 <sup>rd</sup> April 2020, in a situation of limitation, compulsive gambling thoughts, which are already continuous in daily life, can become so intense that they significantly disrupt daily living. Another person said, "I have lost so much money, and I somehow want to recover". These statements indicate the role of positive reinforcement in the form of occasional wins in motivating gamblers to shift to online gambling during the temporary closure of casinos.

Many who suspended gambling hesitated to go online because the perceived risk was high. Problem gamblers reduced their gambling behaviors and cravings Donati et al. (2021), and a very limited shift towards online gambling was found (Kalke et al., 2022) during the pandemic. One of the respondents commented, "when you go to the casino, they give you immediate cash, and your winning is accounted for in terms of chips; these things are not there online". Another respondent commented, "we don't know whether they will credit our money; we are not dealing with people with flesh and blood". Many gamblers felt online gambling was a risky proposition. They also mentioned their lack of knowledge of technology and awareness of online options as another reason to refrain from online gambling, which is in line with the findings of Avanzi et al. (2020).

While for some of those suspended gambling, missing was strong, others have started enjoying the relief of being better off financially and socially. Only a small fraction of gamblers shifted to online gambling during the closure of casinos, and hence gambling as a whole decreased during the pandemic (Lindner et al., 2020).

## **Reopening of Casinos**

When casinos reopened, many gamblers returned to casino gambling while few sustained the cessation. There were two sources from where people returned to casinos. Those who had suspended gambling were one group. One of them said, "the moment I saw the news that the casinos reopened, I could not resist going back". There was another gambler who had the same feelings. Casinos lured their old customers through positive reinforcement of wins and improved and safe gambling facilities. They sent out SMS to existing customers once the casinos reopened. They ensured the customers complied with the hygiene requirements: a maximum number of customers per venue, physical distancing rules, and mandatory face masks. All the respondents said they received an SMS from a casino inviting them to gamble. Three respondents said this SMS was non-resistible and lured them back to casinos.

In some cases, old friends invited them to go back to casinos. One of the participants said, "my colleague with whom I used to go gambling invited me back to gambling, and I couldn't resist". Exposure to and socialization with peers is proven to be positively associated with deviant behavior (Lee 2015; McCuddy and Vogel 2015; Meldrum and Clark 2015), known as the differential association component in social learning theory. The importance of peer interactions on behavior is supported by qualitative literature (Holt, 2007). Researchers have established a positive association between peer interactions and behavior in deviant behaviors like digital piracy (Cooper and Harrison, 2001) and cyber offending (Bachmann, 2010). Researchers have also pointed out the need for further examination of peer influence to obtain a clearer picture of peer influence on behavior (Holt and Copes, 2010). Excerpts from the above interviews confirm the positive influence of exposure to gambling through the news about casinos reopening, the SMS sent out by the casinos and the role of peers on gambling behavior.

Most people who returned to casinos felt they were addicted and had no control. Although some wished to stop gambling, they could not because they were thinking of the prospect of winning someday. This works as differential reinforcement of behavior. Researchers (Hinduja, 2003; Miller and Morris, 2016) have confirmed the role of differential reinforcement in the form of quick rewards leading to a particular behavior. One of the gamblers said, "you can win, and sometimes you win. I think one day continuously my numbers will fall so that I will win". Another gambler said, "I lost so much, at least half of which I should recover". Another person said, "I would have left gambling long back if I was only losing." These statements confirm the role of positive reinforcement in continued gambling.

Another group that returned to casino gambling is online gamblers. They missed the ambience, physical environment and social interactions provided by the gambling venues. Casinos also provided free food and drink, which they could enjoy. A major reason for the return to casino gambling from online gambling was the interchangeable game preference of the gamblers and their poor skills with technology (Avanzi et al.,2020).

The number of gamblers who used the lockdown to cease participation in casino gambling was very small compared to those who returned to gambling. The sustained cessation could owe to the decrease in availability leading to calming down the need for gambling, as explained by Williams et al. (2012). One of the gamblers who completely stopped gambling after the pandemic narrated the quality time spent at home with family and doing alternative and productive activities. He said, "helping my wife in daily chores and gardening made us much closer to each other". Another gambler said," pandemic and the closure of casinos opened my eyes to what I was missing by staying away from the love and laughter of my kids, and I will never waste my time and money on gambling". The influence of negative reinforcement in drifting away from the behavior is established through these statements.

#### Discussion

Previous researchers have observed a shift to online gambling during the COVID-19 pandemic and the temporary closure of casinos (Pantling, 2020; Lepido and Rolander, 2020; Abel and McQueen, 2020; Lischer et al., 2021; Wardle et al., 2021; Yahya and Khawaja, 2020) and a rise in gambling (Håkansson, 2020). Our study findings were contradictory; there was no major shift in online gambling and a decrease in gambling. While the respondents reported a major reason for not resorting to online gambling as a perceived risk, it is possible that, in many cases, the gamblers did not want their families to know that they were gambling. It was impossible to gamble without family members' knowledge, as everyone remained indoors during the lockdown. Some respondents indicated their family members did not know they were visiting the casino. These findings align with another school of previous researchers (Gainsbury et al., 2020; Håkansson et al., 2020), who indicated that gambling habits dropped or remained the same for most gamblers.

Classical conditioning is a powerful theory explaining the influence of associated stimuli in craving for addicted behavior. It has been found that the respondents are reminded of gambling by various stimuli engineered by the casinos or naturally present in the environment, like word of mouth and other associations. Reinforcement by occasional wins has been found to lead to adherence to gambling in the expectation of recovery of past losses. It was paradoxical that while gamblers knew that long-term gambling would invariably result in losses, they had high hopes of recovery in the form of big wins and sometimes continuous wins. However, it was clear that they were aware of the possibility of the risk of losing their stake.

# **Theoretical Implications**

The study recapitulates the importance of Learning Theories in studying behavior and, more importantly, deviant behavior. The study extends the theoretical implications of earlier studies. It establishes that the learning processes and the concept of conditioning associated with learning theory explain the suspension, relapse and continuation of casino gambling. The social learning theory suggests that users' deviant behaviors are determined by two structurally different social learning processes: observational learning and reinforcement learning. The respondents of the study confirmed the same. Most of the gamblers interviewed mentioned the role of family, friends, or travel agents, leading to observational learning of gambling behavior. Gamblers can win quickly and with little risk, reinforcing their gambling behavior. Due to intermittent positive reinforcement in the form of winnings, subjects continued to gamble offline and online. Most individuals claimed that occasionally winning increased the expectation of winning. Occasional wins hinted at the possibility of a single, large win that would enable them to recoup their losses. These statements underpin the observational and reinforcement learning processes of social learning theory.

The study findings also reinforce the concept of conditioning associated with learning theory. People who had to stop gambling due to the closure of casinos were found to be attracted by various cues to online gambling. He has reported, "I have received an SMS from online gambling sites reminding me of the thrill of gambling". Another person said, "a friend was discussing the possibilities of online gambling such that I got lured to the activity". Similarly, in the case of relapse of casino gambling, it was found that cues like a newspaper report, TV news, word of mouth by friends, and SMS from casinos have reminded subjects about casino gambling. These statements agree with the key principles of classical conditioning theory established by Russian physiologist Ivan Pavlov (1897), which confirms the role of classical conditioning theory in studying gambling behavior.

Once the casinos reopened, subjects continued gambling either online or offline due to periodic positive reinforcements in the form of rewards. Most subjects reported that "winning occasionally reinforced the expectation of winning". Wagering more money to recover the losses was long established as a major motivation for gambling (Roehr, 2013; Bibby, 2016; Studer et al., 2015). The recovery motive was the driving force to restart gambling for those who lost money in casinos. Occasional winning pointed to the possibility of one big win that would help them recover the lost money.

Those who continued in the suspended position were also reinforced by the rewards associated with the cessation. These rewards were improved financial condition, freedom from debt, better social and family relations, and higher psychological well-being (Serafini et al., 2020). While the occasional wins motivated gamblers to continue gambling, financial freedom and improved quality of life kept them away from gambling. Thus, it can be confirmed that positive or negative reinforcement leads to adherence or deviation from a behavior.

#### **Practical Implications**

This study confirmed observational learning as a behavior-shaping mechanism. Casinos can use this method to lure prospective tourists who might become habitual gamblers. Casinos can attract tourists by promoting/ offering tour packages, including casino experience and by offering incentives to agents. As highlighted in the study findings, rewards or wins at the casinos will lead to positive reinforcement, persuading tourists to revisit. The need for frequent invitations and reminder cues for regular gamblers, useful for casino management to attract customers, is also emphasized. With remarkable effort, it is possible to win back customers who have left by the cessation or shifting gambling mode. It is also important to communicate the significance of occasional wins to reinforce the positive side of gambling.

Tourists prone to addiction should refrain from visiting casinos even during a package tour, including the casino experience. As far as problem gamblers are concerned, they should realize that they are vulnerable to cues like reminders and advertisements glorifying success in gambling.

#### Limitations

The authors have taken utmost care to objectively understand and describe the subjective lived experiences of the subjects. This has been done by mutual consultations and discussion between the authors, wherever descriptions of experiences could be interpreted in multiple ways. One of the authors is a subject of gambling experience, and care has been taken to avoid the author's influence in interpreting the narratives by bracketing. This author noted his feelings, thoughts, and ideas in a diary to set them aside so they won't influence the reflection process. However, the readers are cautioned to be aware of the possibility of the subjective gambling experience of one of the authors influencing the interpretations.

The language used in the process of interviewing was English. The mother tongue of the subjects was not English. Hence, the intensity of the expressions of feelings might not have been to the extent it could have been possible in the mother tongue. Both the interviewers had a mother tongue different from the mother tongue of the subjects. Had the lived experience been captured in the mother tongue, it could have been more appropriate. However, care has been taken to avoid these limitations to the maximum possible extent by creating conditions favorable for free expression by the subjects.

#### Conclusion

Forced abstinence from casino gambling due to the COVID-19 lockdown, the shift to online gambling and the simultaneous gambling behavior on reopening casinos have become prevalent contemporary issues around the globe. However, research on closure, lapse, relapse, and gambling suspension due to the COVID-19 pandemic remains sparse. In this study, the authors tested the role of learning theories and found that the principles of the theories affect the lapse, relapse, and suspension of gambling. A positive relationship was established between gambling motives (Flack and Morris, 2016; Schellenberg et al., 2016; Dechant, 2014) and type of reinforcement (Devos et al., 2017; Sundqvist et al., 2016; Mathieu et al., 2018; Leeman et al., 2014; Harris et al., 2015) and gambling behavior by previous researchers was confirmed by this study as well. The study findings, in line with previous studies (Håkansson et al., 2021), show that there has not been a major shift to online gambling during the temporary closure of casinos. Major reasons for not shifting to online gambling, as mentioned by the participants and also confirmed in previous studies, were incompetency in using technology (Avanzi et al., 2020), reluctancy to

gamble in the presence of families, lack of trust in online gambling sites, lack of social interaction and improved quality of life attained through time spent with family and or engaging in productive activities (Donati et al., 2021). While few gamblers continued suspension even after the casinos reopened, most of the gamblers returned to gambling. Those who suspended gambling attributed this to the improved quality of life (Dowling et al., 2017; Bonfils et al., 2019; Odone et al., 2020; Marionneau and Järvinen-Tassopoulos, 2022) and the financial stability they experienced during the lockdown, this conclusion is in line with previous research by Donati et al. (2021). Positive reinforcement and classical and operant conditioning are attributed to gambling relapse.

## Funding

No funding was received for this study

## **Declaration of conflict of interest**

There is no competing interest

## Availability of data and material

The recorded interviews are available with the researchers

### **Author's contributions**

The first author conceived the study, did the analysis and wrote the final manuscript. The second author prepared the questionnaire, conducted the interviews and wrote the first draft of the paper. The first author revised the manuscript. Both authors approved of the final version

## Ethics and informed consent

Not required. Informed consent was collected from all the participants

# References

- Abel, T., & McQueen, D. (2020). The COVID-19 pandemic calls for spatial distancing and social closeness: not for social distancing! International journal of public health, 65(3), 231-231. https://doi.org/10.1007/s00038-020-01366-7
- Andriotis, K., & Vaughan, R. D. (2003). Urban residents' attitudes toward tourism development: The case of Crete. Journal of travel research, 42(2), 172-185. https://doi.org/10.1177/0047287503257488
- Auer, M., Malischnig, D., & Griffiths, M. D. (2020). Gambling before and during the COVID-19 pandemic among European regular sports bettors: An empirical study using behavioral tracking data. International Journal of Mental Health and Addiction, 1-8. https://doi.org/10.1007/s11469-020-00327-8
- Avanzi, M., Calabrese, A., Cabrini, S., Infettivologo, M., Professionale, E., & Psicoterapeuta, P. (2020). Il Disturbo da Gioco d'Azzardo (DGA) al tempo della pandemia di COVID-19: Il punto di vista dei SerDP. Alea Bull, 8, 13-17.
- Bachmann, M. (2010). The risk propensity and rationality of computer hackers. International Journal of Cyber Criminology, 4(1/2), 643.
- Bandura, A. (1978). The self system in reciprocal determinism. American psychologist, 33(4), 344.

https://psycnet.apa.org/doi/10.1037/0003-066X.33.4.344

- Bibby, P. A. (2016). Loss-chasing, alexithymia, and impulsivity in a gambling task: Alexithymia as a precursor to loss-chasing behavior when gambling. Frontiers in Psychology, 7, 3. https://doi.org/10.3389/fpsyg.2016.00003
- Biddle, N. (2020). Gambling during the COVID-19 pandemic: ANU Centre for Social Research and Methods and Centre for Gambling Research.
- Bonfils, N. A., Grall-Bronnec, M., Caillon, J., Limosin, F., Benyamina, A., Aubin, H. J., et al. (2019). Giving room to subjectivity in understanding and assessing problem gambling: A patient-centered approach focused on quality of life. Journal of Behavioral Addictions, 8(1), 103–113.

https://doi.org/10.1556/2006.7.2018.137.

- Brodeur, M., Audette-Chapdelaine, S., Savard, A. C., & Kairouz, S. (2021). Gambling and the COVID-19 pandemic: A scoping review. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 111, 110389. https://doi.org/10.1016/j.paphp.2021.110389.
  - https://doi.org/10.1016/j.pnpbp.2021.110389
- Brown, R., & Hickman, A. (2020). Changes in online gambling during the COVID-19 pandemic: April update.
- But, J. W. P., & Ap, J. (2017). The impacts of casino tourism development on Macao residents' livelihood. Worldwide Hospitality and Tourism Themes. https://doi.org/10.1108/WHATT-02-2017-0011
- Cheung, C. M., Liu, I. L., & Lee, M. K. (2015). How online social interactions influence customer information contribution behavior in online social shopping communities: a social learning theory perspective. Journal of the Association for Information Science and Technology, 66(12), 2511-2521.

https://doi.org/10.1002/asi.23340

Cilesiz, S. (2011). A phenomenological approach to experiences with technology: Current state,

promise, and future directions for research. Educational Technology Research and Development, 59(4), 487-510.

https://doi.org/10.1007/s11423-010-9173-2

- Clarke, V., & Braun, V. (2013). Successful qualitative research: A practical guide for beginners. Successful Qualitative Research, 1-400.
- Colaizzi, P. F. (1978). Psychological research as the phenomenologist views it.
- Cooper, J., & Harrison, D. M. (2001). The social organization of audio piracy on the Internet. Media, Culture & Society, 23(1), 71-89. https://doi.org/10.1177/016344301023001004
- Creswell, J. W., & Poth, C. N. (2016). Qualitative inquiry and research design: Choosing among five approaches. Sage publications.
- Czegledy, P., 2020. Canadian land-based gambling in the time of COVID-19. Gaming Law Rev. 24, 555–558.

https://doi.org/10.1089/glr2.2020.24811

- Davis, R. (2020). Frequent gamblers betting more despite coronavirus sports lockdown, study says. *The Guardian*, 24.
- Dechant, K. (2014). Show me the money: Incorporating financial motives into the Gambling Motives Questionnaire. Journal of Gambling Studies, 30(4), 949-965. https://doi.org/10.1007/s10899-013-9386-5
- Deery, M., Jago, L., & Fredline, L. (2012). Rethinking social impacts of tourism research: A new research agenda. Tourism Management, 33(1), 64-73. https://doi.org/10.1016/j.tourman.2011.01.026
- Devos, G., Challet-Bouju, G., Burnay, J., Maurage, P., Grall-Bronnec, M., & Billieux, J. (2017). Adaptation and validation of the Gambling Motives Questionnaire-Financial (GMQ-F) in a sample of French-speaking gamblers. International Gambling Studies, 17(1), 87-101. https://doi.org/10.1080/14459795.2016.1264080
- Donati, M. A., Cabrini, S., Capitanucci, D., Primi, C., Smaniotto, R., Avanzi, M., ... & Roaro, A. (2021). Being a gambler during the COVID-19 pandemic: a study with Italian patients and the effects of reduced exposition. International journal of environmental research and public health, 18(2), 424.

https://doi.org/10.3390/ijerph18020424

- Dowling, N. A., Merkouris, S. S., Greenwood, C. J., Oldenhof, E., Toumbourou, J. W., & Youssef, G. J. (2017). Early risk and protective factors for problem gambling: A systematic review and meta-analysis of longitudinal studies. Clinical Psychology Review, 51, 109–124. https://doi.org/10.1016/j.cpr.2016.10.008
- Ettman, C. K., Abdalla, S. M., Cohen, G. H., Sampson, L., Vivier, P. M., & Galea, S. (2020). Prevalence of depression symptoms in US adults before and during the COVID-19 pandemic. *JAMA network open*, 3(9), e2019686-e2019686. https://doi:10.1001/jamanetworkopen.2020.19686
- Flack, M., & Morris, M. (2016). The temporal stability and predictive ability of the Gambling Outcome Expectancies Scale (GOES): A prospective study. Journal of Gambling Studies, 32(3), 923-933.

https://doi.org/10.1007/s10899-015-9581-7

Fugard, A. J., & Potts, H. W. (2015). Supporting thinking on sample sizes for thematic analyses: a quantitative tool. International Journal of Social Research Methodology, 18(6), 669-684. https://doi.org/10.1080/13645579.2015.1005453

- Gainsbury, S. M., Russell, A., Wood, R., Hing, N., & Blaszczynski, A. (2015). How risky is Internet gambling? A comparison of subgroups of Internet gamblers based on problem gambling status. New media & society, 17(6), 861-879. https://doi.org/10.1177/1461444813518185
- Gainsbury, S.M., Swanton, T.B., Burgess, M.T., Blaszczynski, A., 2020. Impacts of the COVID-19 shutdown on gambling patterns in Australia: consideration of problem gambling and psychological distress. J. Addict. Med. Publish Ahead of Print. https://doi.org/ 10.1097/ADM.00000000000793
- Georgiadou, E., Müller, A., Koopmann, A., Leménager, T., Hillemacher, T., & Kiefer, F. (2022). Changes in gambling behavior during the COVID-19 lockdown in Germany. International Gambling Studies, 22(1), 45-62. https://doi.org/10.1080/14459795.2021.1956562
- Giorgi, A. (1985). Toward the articulation of psychology as a coherent discipline. https://psycnet.apa.org/doi/10.1037/10117-022
- Giorgi, A. (2008). Concerning a serious misunderstanding of the essence of the phenomenological method in psychology. Journal of phenomenological psychology, 39(1), 33-58.
- Griffiths, S., Reith, G., Wardle, H., & Mackie, P. (2020). Pandemics and epidemics: public health and gambling harms. Public Health, 184, 1. https://doi: 10.1016/j.puhe.2020.06.022
- Gursoy, D., & Rutherford, D. G. (2004). Host attitudes toward tourism: An improved structural model. Annals of Tourism Research, 31(3), 495-516. https://doi.org/10.1016/j.annals.2003.08.008
- Haase, J. E., & Myers, S. T. (1988). Reconciling paradigm assumptions of qualitative and quantitative research. Western journal of nursing research, 10(2), 128-137. https://doi.org/10.1177/019394598801000202
- Håkansson, A. (2020). Changes in gambling behavior during the COVID-19 pandemic—a web survey study in Sweden. International Journal of Environmental Research and Public Health, 17(11), 4013.

https://doi.org/10.3390/ijerph17114013

- Håkansson, A., Åkesson, G., Grudet, C., & Broman, N. (2021). No apparent increase in treatment uptake for gambling disorder during ten months of the COVID-19 pandemic—Analysis of a regional specialized treatment unit in Sweden. International Journal of Environmental Research and Public Health, 18(4), 1918. https://doi.org/10.3390/ijerph18041918
- Håkansson, A., Fernández-Aranda, F., Menchón, J. M., Potenza, M. N., & Jiménez-Murcia, S. (2020). Gambling during the COVID-19 crisis–a cause for concern. Journal of addiction medicine, 14(4), e10. https://doi: 10.1097/ADM.0000000000690
- Ham, S., Brown, D. O., & Jang, S. (2004). Proponents or opponents of casino gaming: A
- qualitative choice model approach. Journal of Hospitality & Tourism Research, 28(4), 391-407.

https://doi.org/10.1177/1096348004270105

Harris, N., Newby, J., & Klein, R. G. (2015). Competitiveness facets and sensation seeking as predictors of problem gambling among a sample of university student gamblers. Journal of Gambling Studies, 31(2), 385-396. https://doi.org/10.1007/s10899-013-9431-4

- Higgins, G. E., & Makin, D. A. (2004). Does social learning theory condition the effects of low self-control on college students' software piracy? Journal of Economic Crime Management, 2(2), 1-22.
- Hinduja, S. (2003). Trends and patterns among online software pirates. Ethics and Information Technology, 5(1), 49-61.
  - https://doi.org/10.1023/A:1024910523384
- Hinduja, S., & Ingram, J. R. (2008). Self-control and ethical beliefs on the social learning of intellectual property theft. W. Criminology Rev., 9, 52.
- Hinduja, S., & Ingram, J. R. (2009). Social learning theory and music piracy: The differential role of online and offline peer influences. Criminal Justice Studies, 22(4), 405-420. https://doi.org/10.1080/14786010903358125
- Hing, N., Cherney, L., Gainsbury, S. M., Lubman, D. I., Wood, R. T., & Blaszczynski, A. (2015). Maintaining and losing control during Internet gambling: A qualitative study of gamblers' experiences. New Media & Society, 17(7), 1075-1095. https://doi.org/10.1177/1461444814521140
- Holt, T J. (2007). Subcultural Evolution? Examining the Influence of On- and Offline Experiences on Deviant Subcultures. Deviant Behavior 28:171–98. https://doi.org/10.1080/01639620601131065
- Holt, T. J., & Copes, H. (2010). Transferring subcultural knowledge online: Practices and beliefs of persistent digital pirates. Deviant Behavior, 31(7), 625-654. https://doi.org/10.1080/01639620903231548
- Holt, T. J., Burruss, G. W., & Bossler, A. M. (2010). Social learning and cyber-deviance: Examining the importance of a full social learning model in the virtual world. Journal of Crime and Justice, 33(2), 31-61.

https://doi.org/10.1080/0735648X.2010.9721287

- Homans, G. C., (1974) Social Behavior: Its Elementary Forms. Rev. ed.
- Hunt, K., et al., 2020. Protocol for a mixed-method investigation of the impact of the COVID-19 pandemic and gambling practices, experiences, and marketing in the UK: the "Betting and Gaming COVID-19 Impact Study". International Journal of Environmental Research and Public Health 17, 8449.

https://doi.org/10.3390/ijerph17228449 Hwang, S., & Akers, R. L. (2003). Adolescent substance use in South Korea: A cross-cultural test

- Hwang, S., & Akers, R. L. (2003). Adolescent substance use in South Korea: A cross-cultural test of three theories. Social learning theory and the explanation of crime: A guide for the new century, 39-64.
- Kalke, J., Schütze, C., Lahusen, H., & Buth, S. (2022). Parameters for Change in Offline Gambling Behavior After the First COVID-19 Lockdown in Germany. Frontiers in Psychology, 13. https://doi: 10.3389/fpsyg.2022.857234
- King, D. L., Delfabbro, P. H., Billieux, J., & Potenza, M. N. (2020). Problematic online gaming and the COVID-19 pandemic. Journal of Behavioral Addictions, 9(2), 184-186. https://doi.org/10.1556/2006.2020.00016
- Lam, Son K., Florian Kraus, and Michael Ahearne. "The diffusion of market orientation throughout the organization: A social learning theory perspective." Journal of Marketing 74.5 (2010): 61-79.

https://doi.org/10.1509/jmkg.74.5.061

Lee, B. H. (2015). Traditional and cyber deviance: Examining the role of self-control and deviant peer association. Michigan State University. Criminal Justice.

- Lee, D., Kim, S., Han, H., & Wong, A. K. F. (2020). Casino tourism development a blessing or curse? Assessment of casino tourism impacts and suggestions for sustainable casino tourism development. Asia Pacific Journal of Tourism Research, 25(11), 1168-1184. https://doi.org/10.1080/10941665.2020.1837891
- Leeman, R. F., Hoff, R. A., Krishnan-Sarin, S., Patock-Peckham, J. A., & Potenza, M. N. (2014). Impulsivity, sensation-seeking, and part-time job status in relation to substance use and gambling in adolescents. Journal of Adolescent Health, 54(4), 460-466. https://doi.org/10.1016/j.jadohealth.2013.09.014
- Lepido, D., & Rolander, N. (2020). Housebound Italian kids strain network with Fortnite marathon. Retrieved January, 13, 2021.
- Levitt, H. M., Bamberg, M., Creswell, J. W., Frost, D. M., Josselson, R., & Suárez-Orozco, C. (2018). Journal article reporting standards for qualitative primary, qualitative metaanalytic, and mixed methods research in psychology: The APA Publications and Communications Board task force report. American Psychologist, 73(1), 26. https://psycnet.apa.org/doi/10.1037/amp0000151
- Lee, Z. W., Cheung, C. M., & Chan, T. K. (2014, January). Explaining the development of the excessive use of massively multiplayer online games: a positive-negative reinforcement perspective. In 2014 47th Hawaii International Conference on System Sciences (pp. 668-677). IEEE.

https://doi.org/10.1109/HICSS.2014.89

Lindner, P., Forsström, D., Jonsson, J., Berman, A. H., & Carlbring, P. (2020). Transitioning between online gambling modalities and decrease in total gambling activity, but no indication of increase in problematic online gambling intensity during the first phase of the COVID-19 outbreak in Sweden: A time series forecast study. Frontiers in public health, 8, 554542.

https://doi.org/10.3389/fpubh.2020.554542

- Lischer, S., Steffen, A., Schwarz, J., & Mathys, J. (2021). The influence of lockdown on the gambling pattern of Swiss casinos players. International Journal of Environmental Research and Public Health, 18(4), 1973. https://doi.org/10.3390/ijerph18041973
- Lowry, P. B., Zhang, J., Wang, C., & Siponen, M. (2016). Why do adults engage in cyberbullying on social media? An integration of online disinhibition and deindividuation effects with the social structure and social learning model. Information Systems Research, 27(4), 962-986.

https://doi.org/10.1287/isre.2016.0671

- Marionneau, V., & Järvinen-Tassopoulos, J. (2022). Treatment and help services for gambling during COVID-19: Experiences of gamblers and their concerned significant others. Nordic Studies on Alcohol and Drugs, 39(1), 10-24. https://doi.org/10.1177/14550725211030727
- Mathieu, S., Barrault, S., Brunault, P., & Varescon, I. (2018). Gambling motives: Do they explain cognitive distortions in male poker gamblers? Journal of Gambling Studies, 34(1), 133-145.

https://doi.org/10.1007/s10899-017-9700-8

McCuddy, T., & Vogel, M. (2015). More than just friends: Online social networks and offending. Criminal Justice Review, 40(2), 169-189. https://doi.org/10.1177/0734016814557010

- Meldrum, R. C., & Clark, J. (2015). Adolescent virtual time spent socializing with peers, substance use, and delinquency. Crime & Delinquency, 61(8), 1104-1126. https://doi.org/10.1177/0011128713492499
- Mercer, K. B., & Eastwood, J. D. (2010). Is boredom associated with problem gambling behavior? It depends on what you mean by 'boredom'. International Gambling Studies, 10(1), 91-104.

https://doi.org/10.1080/14459791003754414

- Miller, B., & Morris, R. G. (2016). Virtual peer effects in social learning theory. Crime & Delinquency, 62(12), 1543-1569. https://doi.org/10.1177/0011128714526499
- Morrow, R., Rodriguez, A., & King, N. (2015). Colaizzi's descriptive phenomenological method. The psychologist, 28(8), 643-644.
- Morse, J. M. (1994). Designing funded qualitative research.
- Newstrom, J. W., & Davis, K. (2002). Organizational behavior (1 Ith ed.). New York: McGrawHill Higher Education.
- Ng Yuen, N., & Bursby, R. (2020). Are all bets off? The reopening of casinos, bingo halls, and other gambling establishments in post-lockdown UK. Gaming Law Review, 24(8), 559-562.

https://doi.org/10.1089/glr2.2020.0022

- Nichols, M. W., & Tosun, M. S. (2017). The impact of legalized casino gambling on crime. Regional Science and Urban Economics, 66, 1-15. https://doi.org/10.1016/j.regsciurbeco.2017.05.005
- Odone, A., Lugo, A., Amerio, A., Borroni, E., Bosetti, C., Carreras, G., ... & Gallus, S. (2020). COVID-19 lockdown impact on lifestyle habits of Italian adults. Acta Bio Medica: Atenei Parmensis, 91(9-S), 87.

https://doi.org/10.23750%2Fabm.v91i9-S.10122

Pacifici, R. Gioco D'azzardo e COVID-19. Epicentro. Available online: https://www.epicentro.iss.it/coronavirus/sars-cov-2- dipendenze-gioco-azzardo (accessed on 3 November 2020).

- Pantling, A. (2020). Gaming usage up 75 percent amid coronavirus outbreak, Verizon reports. The Hollywood Reporter.
- Patton, M. Q. (2014). Qualitative research & evaluation methods: Integrating theory and practice. Sage publications.
- Pavlov, I. (1897). Classical conditioning. Wikipedia. [Paper reference 1].
- Pieh, C., Budimir, S., & Probst, T. (2020). The effect of age, gender, income, work, and physical activity on mental health during coronavirus disease (COVID-19) lockdown in Austria. *Journal of psychosomatic research*, 136, 110186. https://doi.org/10.1016/j.jpsychores.2020.110186
- Price, A. (2020). Online gambling in the midst of COVID-19: a nexus of mental health concerns, substance use and financial stress. International journal of mental health and addiction, 1-18.

https://doi.org/10.1007/s11469-020-00366-1

Rajkumar, R. P. (2020). COVID-19 and mental health: A review of the existing literature. Asian journal of psychiatry, 52, 102066.

https://doi.org/10.1016/j.ajp.2020.102066

Roehr, B. (2013). American psychiatric association explains DSM-5. Bmj, 346.

https://doi.org/10.1136/bmj.f3591

- Schellenberg, B. J., McGrath, D. S., & Dechant, K. (2016). The Gambling Motives Questionnaire financial: Factor structure, measurement invariance, and relationships with gambling behavior. International Gambling Studies, 16(1), 1-16. http://dx.doi.org/10.1080/14459795.2015.1088559
- Schwinger, M., Trautner, M., Kärchner, H., & Otterpohl, N. (2020). Psychological impact of corona lockdown in Germany: Changes in need satisfaction, well-being, anxiety, and depression. *International journal of environmental research and public health*, 17(23), 9083.

https://doi.org/10.3390/ijerph17239083

- Serafini, G., Parmigiani, B., Amerio, A., Aguglia, A., Sher, L., & Amore, M. (2020). The psychological impact of COVID-19 on the mental health in the general population. https://doi.org/10.1093/qjmed/hcaa201
- Sharman, S. (2022). Gambling in football: How much is too much? Managing sport and leisure, 27(1-2), 85-92.
  - https://doi.org/10.1080/23750472.2020.1811135
- Sharman, S., Roberts, A., Bowden-Jones, H., & Strang, J. (2021). Gambling in COVID-19 lockdown in the UK: Depression, stress, and anxiety. Frontiers in Psychiatry, 12, 621497. https://doi.org/10.3389/fpsyt.2021.621497
- Skinner, W. F., & Fream, A. M. (1997). A social learning theory analysis of computer crime among college students. Journal of research in crime and delinquency, 34(4), 495-518. https://doi.org/10.1177/0022427897034004005
- Smallridge, J. L. (2012). Social learning and digital piracy: Do online peers matter? Indiana University of Pennsylvania.
- Studer, B., Limbrick-Oldfield, E. H., & Clark, L. (2015). 'Put your money where your mouth is!': effects of streaks on confidence and betting in a binary choice task. Journal of Behavioral Decision Making, 28(3), 239-249.
  http://lime.com/doi/10.1002/1.lime.com/doi/
  - https://doi.org/10.1002/bdm.1844
- Sundqvist, K., Jonsson, J., & Wennberg, P. (2016). Gambling motives in a representative Swedish sample of risk gamblers. Journal of Gambling Studies, 32(4), 1231-1241. https://doi.org/10.1007/s10899-016-9607-9
- Turner, N. E. (2020). COVID-19 and gambling in Ontario. Journal of Gambling Issues, 44.
- Verrill, S. W. (2008). Social structure, social learning, and criminal behavior: Cross-level moderator effects. New York, NY: LFB Scholarly.
- Wardle, H. (2020). The emerging adults gambling survey: Study protocol. Wellcome Open Research, 5.
  - https://doi.org/10.12688%2Fwellcomeopenres.15969.1
- Wardle, H., Donnachie, C., Critchlow, N., Brown, A., Bunn, C., Dobbie, F., ... & Hunt, K. (2021). The impact of the initial Covid-19 lockdown upon regular sports bettors in Britain: Findings from a cross-sectional online study. Addictive Behaviors, 118, 106876. https://doi.org/10.1016/j.addbeh.2021.106876
- Warr, M. (2002). Companions in crime: The social aspects of criminal conduct. Cambridge University Press.
- Wertz, F. J. (2011). Five ways of doing qualitative analysis: Phenomenological psychology, grounded theory, discourse analysis, narrative research, and intuitive inquiry. Guilford Press.

- Williams, R. J., West, B. L., & Simpson, R. I. (2012). Prevention of problem gambling: A comprehensive review of the evidence and identified best practices. https://hdl.handle.net/10133/3121
- Xuereb, S., Kim, H. S., Clark, L., & Wohl, M. J. (2021). Substitution behaviors among people who gamble during COVID-19 precipitated casino closures. International Gambling Studies, 21(3), 411-425.

https://doi.org/10.1080/14459795.2021.1903062

Yahya, A. S., & Khawaja, S. (2020). Problem gambling during the COVID-19 pandemic. The primary care companion for CNS disorders, 22(4), 27146. https://doi.org/10.4088/PCC.20com02690