RELATIONSHIP AMONG PERSONALITY TRAITS, GAMBLING MOTIVATION AND GAMBLING SEVERITY

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DEDICATION

This thesis is dedicated to my beloved parents Mr.Thomas Joseph Poovathunkal and Mrs. Alice Thomas, who have given me invaluable educational opportunities, my husband, Mr. Roshan Thomson, who gave me strength when I thought of giving up. A special feeling of gratitude to my sons Rohil and Ashwill, my emotional anchors, and constant source of support. To my parents in law, siblings, brothers in law and sisters in law who always encouraged me to complete my PhD.

DECLARATION

I, Ms. Albino Simple Tom, do hereby declare that this dissertation titled "**Relationship among Personality Traits, Gambling Motivation and Gambling Severity**" is a record of my original research work under the supervision of Dr. Nandakumar Mekoth, Professor, Goa Business School, Goa University, Goa.

I also declare that this thesis has not formed the basis for the award of any Degree/ Diploma / Associate-ship/ Fellowship or other similar titles to any candidate or university.

Albino Simple Tom

Place: Goa Business School, Goa University.
Date: 1st December 2020

CERTIFICATE

This is to certify that the Ph.D. thesis titled "**Relationship among Personality Traits, Gambling Motivation and Gambling Severity**" is an original work carried out by Ms. Albino Simple Tom under my guidance at Goa Business School, Goa University. This dissertation or any part thereof has not formed the basis for the award of any Degree, Diploma, Title, or Recognition before.

Dr. Nandakumar Mekoth
Research Guide

Place: Goa Business School, Goa University
Date: 1st December 2020

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ABSTRACT

Gambling is a major entertainment for the tourism industry and a valued revenue source to the government and private enterprise. Nevertheless, for problem gamblers and their families and communities, gambling is the cause of considerable harm. Consumer behaviour studies have much to offer in understanding gambling behaviour.

Gambling involves the staking of an item of value on an outcome governed by chance. It comprises a wide range of commercial activities, including lotteries, electronic gaming machines, casino games, racing, and sports betting. Almost all commercial gambling forms are designed to negatively return to players, a relative advantage to the house or gambling operator.

Mushrooming of gambling venues and activities has made it highly accessible worldwide, and many are getting addicted to gambling. Gambling is a regulated industry with statutory regulatory bodies governing it. Nevertheless, there is intrinsic conflict in government regulation of an industry that provides significant revenue to the government and private enterprises.

Gambling harm is variably defined. A public health approach argues for assessing harm on a continuum and is determined at individual, family, and community levels. Harm can be personal, social, vocational, and financial. The Productivity Commission (2009) estimated that 0.5 – 1% suffer significant gambling problems. A further 1.4 – 2.1% is at moderate risk for problem gambling. Many more people (family members, work colleagues) are indirectly affected by problem gambling. Problem gambling has a high level of co-occurrence with mental health and substance use problems.

Continuous gambling forms, such as electronic gaming machines, racing, and casino tables, are most likely associated with problem gambling. The main measure to assess problem gambling is the Problem Gambling Severity Index of the Canadian Problem Gambling Index. The South Oaks Gambling Screen, which was designed as a clinical measure, is also used.

People are motivated to gamble recreationally by the desire for excitement and arousal and relief from stress and negative mood. Knowledge of the factors that affect gambling participation across the lifespan is quite limited. There is no widely accepted causal explanation or a single theoretical model that adequately accounts for problem gambling's aetiology. Learning theory, cognitive models, and neurophysiologic models all have some evidence base. Very little evidence supports personality or psycho-analytic explanations. The absence of a unifying theory of problem gambling is reflected in the range of techniques that have been employed in its treatment, and there is some empirical evidence for several different interventions.

Research gaps identified through the literature on gambling indicated the need to explore gambling antecedents like various personality traits. This study also considered exploring the interaction effects of the antecedents of gambling motivation, the mediating role of gambling motivation, and the moderating influence of risk propensity and subjective norms on the different relationships.

The respondents in this study were 254 casino customers who frequented casinos for gambling. The data were analyzed using SPSS version 25 and Structural Equation Modeling in AMOS version 25. The measurement models and the structural models were tested, and the findings were interpreted in view of the study objectives.

Analysis of data revealed the following findings:

- There was a significant relationship between the personality traits of optimum stimulation level, self-esteem, optimism and impulsivity, and gambling motivation.
- There was no relationship between self-efficacy and gambling motivation.
- Gambling motivation was found to predict gambling severity.
- Gambling motivation fully mediates the relationship between optimism and gambling severity.
- Gambling motivation fully mediates the relationship between optimum stimulation level and gambling severity.
- Gambling motivation partially mediates the relationship between impulsivity and gambling severity and self-esteem and gambling severity.

- There were significant moderation effects of subjective norms on personality traits like self-esteem, optimism, impulsivity, and gambling motivation at the model and or at different path levels.
- Subjective norms moderated the relationship between gambling motivation and gambling severity.
- Subjective norms did not have any moderating effect on the relationship between personality traits, optimum stimulation level, and self-efficacy, and gambling motivation.
- Paths between optimism and gambling motivation and between self-esteem and gambling motivation are moderated by risk propensity at model and or at different path levels.
- Risk propensity did not have any moderating effect on the relationship between personality traits, optimum stimulation level, impulsivity, and self-efficacy, and gambling motivation.
- The relationship between gambling motivation and gambling severity was not moderated by risk propensity.

In light of the study findings, managerial implications have been discussed, and future research directions have been suggested.

Keywords: Personality Traits, Optimum Stimulation Level, Self Esteem, Optimism, Impulsivity, Self Efficacy, Gambling Motivation, Gambling Severity

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INTRODUCTION

CHAPTER 1

INTRODUCTION

Gambling can be defined as pledging money or something of value at risk to win more money or something of greater value. Risking money on the result of something where the outcome is uncertain, like a game, horse racing, and elections are also gambling. Reckless behavior like rash driving, drinking and driving, substance use, etc., is considered gambling with one's life. In other words, gambling is taking a chance. The value pledged on the uncertainty is known as the stake, and people stake money, possessions, and even their lives in various forms of gambling. Gambling is considered a legitimate and natural leisure activity (McMillen and McMillen, 1996).

Gambling is one of the major entertainment and attraction of the tourism industry; since it is available all year round. Legal gambling venues are called casinos. The development of the casino industry has contributed remarkably to the tourism industry (Wan, 2012). Gambling can be used as an attraction to increase tourists in destinations that have lost their charm to attract tourists. Many destinations that otherwise are not visited by tourists are revived due to gambling (Richard, 2010). Destinations like Las Vegas, in the USA, Morocco in Africa, Monte-Carlo in Monaco, and Macau in China are famous gambling attractions.

The gambling industry is a major source of revenue to the government and a valuable source of business to private enterprises (Thomson and Mekoth, 2020). The gambling industry also helps for the locality's economic development (Kang, Lee, Yoon, and Long, 2008). The gambling industry alone generates more employment than the airline industry. The income from gambling is almost equivalent to the lodging industry in the United (Economic Impact of the US Gaming Industry, 2018). The gambling industry's growth also brings about development in allied services like hospitality services, hotels, restaurants, transportation, real estate, etc. (Eadington, 2003; Henderson, 2006; Ishihara, 2017). Along with the gambling industry's growth, the destination's recreation and entertainment facilities also improve to cater to the tourists' varied needs and people accompanying them. Residents can utilize these facilities as leisure activities.

The gambling industry is expanding rapidly worldwide, giving rise to more gambling opportunities (Lee et al., 2005). The upsurge of the casino industry owes a lot to the thrilling experience provided to the customers. Casinos are thrilling, exciting, and also engaging. Gamblers find it thrilling to risk money and wait for the outcome. Unlike other forms of betting, while gambling in the casinos, the outcome is known immediately. The players get the thrill of winning huge amounts of money, and those who lose get the thrill to try hoping for a great win. While gambling provides a thrill to some tourists, it provides leisure to other tourists. Gambling is considered a high-quality recreation since it is associated with upmarket hotels. In the recent era, elders have more awareness and availability of leisure activities compared to their ancestors. They are also well off, more active, and have more leisure time than their forerunners, who mostly lacked either of them or even all of them (Longino, 1994). All these lead seniors to look for leisure activities to enjoy and keep them engaged (Phillips, 2009). People who consider gambling as a leisure activity concentrates on the social and entertainment aspect. Casino gambling is considered to be a leisure activity. Hence casinos have become a venue for socializing and entertainment for elderly gamblers (Zaranek and Chapleski, 2005). Casinos also provide the players with food, beverage, and various forms of entertainment too. Many tourists consider this as an alternative to adventure tourism (Eadington, 2003).

Since gambling is considered a human behavior like any other type of addictive behaviors, it is important to analyze the factors which lead to this particular behavior. Since individuals engage only in those behaviours they consider important, it is crucial to analyze personality traits to determine the various antecedents leading to the behaviour. More than the socio-cultural factors, personality plays a major role in defining individual behavior. Perceived importance, perceived pleasure, and symbolic value are considered factors leading to leisure involvement (Havitz and Dimanche, 1997). Perceived importance and pleasure together is the attractiveness of a product or activity and the pleasure gained from the use or participation. Symbolic value refers to the extent to which an activity provides a platform to express the person's desired image or, in other words, it's an individual's self-expression (Lee and Scott, 2009). These factors are very much personal to an individual or part of an individual's personality. Hence studies analyzing consumer behavior examine various personality traits that determine the behavior pattern of individuals. This holds in the study of

gambling behavior too.

Though many people participate in gambling as a form of recreation or even gain an income, repeated visits lead to increased gambling severity. Severity means the gravity of an issue. Gamblers with a higher degree of severity find it difficult to control the money spent for gambling or the frequency of visits or the duration of their visits, which will negatively impact the gambler himself and people associated (Neal, Delfabbro, and O'Neil, 2005). Once the severity of a particular behavior becomes massive, people lose control over their actions and neglect other important daily life activities. Obsession and compulsion are the major characteristics of elevated severity (Anton, 2000). In gambling, people with elevated severity find it difficult to limit the time and money spent. Gambling severity can be assessed by checking the amounts of money spent on gambling (Auer and Griffiths, 2012) and the time spent in gambling venues (Monaghan and Blaszczynski, 2010).

1.1 BACKGROUND OF THE STUDY

Gambling is one of the leisure activities which have attracted a vast number of users. Many countries are promoting legalized forms of gambling as a leisure activity. The gambling industry makes huge revenue, and the tax paid by casinos is a major income source in destinations where gambling is legalized. The availability and accessibility of gambling venues lure more and more people into this behavior. Gambling is a double-edged sword. Gambling provides significant benefits to the local economy but, at the same time, has negative associations also. The major cost of gambling would be personal losses to the gamblers and their families and increased crime rates. Care must be taken to alleviate the negative impacts and to intensify the benefits of the gambling industry.

Various aspects of gambling have been examined in different areas of research. The antecedents or factors which lead to gambling have been of interest to researchers from various fields. Studies on addiction have examined the various reasons for gambling addictions, the influence of demographic variables on gambling addiction (Yi et al., 2019), impulsivity, and gambling addiction (Kräplin et al., 2014). Counseling, psychology, psychiatry, biological psychiatry, mental psychiatry, mental health, medicine, psychological medicine, neurology, clinical neuropsychiatry, and so

on have examined the antecedents of gambling to analyze the behavior patterns of gamblers and to help them treat or control gambling-related issues. Researchers from the field of counseling and psychiatry have examined the personality dimension in pathological gambling (Kim and Grant, 2001), the role of families on gambling behavior (Grant and Kim, 2002) treatment of non-substance behaviors (Yau and Potenza, 2015), and so on. Research in psychology has explored several treatment options for gamblers (Rash and Petry, 2014) cognitive-behavioral techniques for treating gambling (Smith et al., 2015). These studies focused mainly on examining the underlying personality which leads to gambling, the implication of gambling on health (Rodriguez-Monguio, Errea, and Volberg 2017; Nower et al., 2018; Kotter et al., 2019), problems associated with uncontrolled gambling (Hing et al., 2016; King et al., 2019) influence of heredity on gambling (Chan, Li, and Leung, 2016; Xuan et al., 2017; Vitaro et al., 2019) gambling and mental conditions like depression (Krause et al., 2017; Edgerton, Keough and Roberts, 2018; Ranta et al., 2019) controlling gambling (Jiménez-Murcia et al., 2017; Kourgiantakis, Saint-Jacques and Tremblay, 2018; Pickering et al., 2018), etc. Another field of study on gambling focused on various marketing aspects of gambling. Tourism, consumer behavior, leisure, gaming, business, management, marketing, finance, economics, human resources, and similar disciplines conducted studies on the importance of the gambling industry, socio-cultural and economic impact of gambling industry on the host community, strategy development for sustainability, work conditions of employees as well as behavior of gamblers.

Scholars dwelling into gambling motivation and antecedents of gambling (Dechant and Ellery, 2011; Binde, 2013; Dechant, 2014; Canale et al., 2015; Luceri and Vergura, 2015) have taken the support of well-established theories like the theory of reasoned action (Fishbein and Ajzen 1980), social cognitive theory (Bandura 1991, 1998), Self-determination theory (Ryan and Deci, 2000), and extension to these established theories like Arousal theory (Reisenzein, 1994), Reversal Theory (Anderson and Brown, 1987), frustration theory (Amsel, 1958), play theory (Aasved, 2003), Theory of Rational Addiction (Becker and Murphy,1988), Activity theory (Knapp, 1977) were also considered to study the gambling behavior. Extant work has been done in pathological gambling and recovery (Hodgins, 2001; Hodgins and El-Guebaly, 2004; Slutske, 2006).

1.2 SIGNIFICANCE OF THE INQUIRY

Gambling severity is both a boon and a bane considered from the points of view of the casino industry, government, society, and family. The gambling industry looks forward to sprawling casinos for more business and profit. The government supports controlled gambling since it provides revenue to the government and becomes an attraction for alluring tourists. The local population benefits from casinos as it provides entertainment facilities, direct and indirect employment opportunities, growth of allied industries, and overall infrastructural development. Considering the varied needs of the gambling industry stakeholders, it is important to allow regulated gambling without harming society. The government can achieve this by implementing various measures to help gamblers control this behavior to protect them and their families. Since gambling is a behaviour, it is important to understand the personality traits that lead to this behaviour while examining gambling. Identifying antecedents, mediators, and moderators of gambling severity have significant implications for the casino industry and counselors and significant others of gamblers. This study's findings would indicate the methods and strategies to woo customers, retain them, and increase their stakes from the casino industry's perspective. The findings would be of immense implications for counseling as well as dealing with close relations. The incorporation of gambling motivation as a mediator and the moderators that extend beyond personality traits would be a new and different approach to treatment.

1.3 PURPOSE OF THE STUDY

This research aims to craft added contributions to the existing literature on gambling motivation and gambling severity. This study proposes to use the concepts from the Social Cognitive Theory: An Agentic Perspective, by Albert Bandura (1999; 2001) and Self Determination Theory (Ryan and Deci, 2000). This research's primary purpose is to explore the influence of various personality traits on gambling motivation and gambling motivation's mediating effect on gambling severity. The study further focuses on the moderating effects of risk propensity and subjective norms on the relationship between gambling motivation and gambling severity.

1.4 SCOPE OF THE STUDY

Literature in the area of gambling indicates that it is behaviour influenced by personality traits. Various character traits are considered as the antecedents of gambling. It is essential to understand the personality traits that lead to gambling to examine the shift from leisure gambling to higher gambling severity degrees. This study tests the influence of personality traits on gambling severity mediated by gambling motivation. The study also tests the moderating effect of risk propensity and subjective norms on the relationships among personality traits, gambling motivation, and gambling severity. The personality traits considered antecedents are impulsivity, self-efficacy, optimism, self-esteem, and optimum stimulation level. Structural equation modeling is a combination of factor analysis and multiple regression analysis. This multivariate statistical analysis technique is used to analyze the relationships between the measured variables and latent constructs.

The study has been conducted among casino gamblers in the state of Goa. Structured questionnaires were personally administered to customers who visit onshore casinos. People who were first-time visitors to the casinos were excluded from the study. Data have been gathered between April 2018 and June 2019.

1.5 RESEARCH QUESTIONS

Gambling as a form of leisure is gaining popularity in most of the world (The Economist, 2014; Markham and Young, 2015). Many countries promote gambling for government revenue (Livingstone and Woolley, 2007; Doran and Young, 2010; Young, Lamb, and Doran, 2011; Rintoul et al., 2012; Young, Doran, and Markham, 2013). Along with the mushrooming of casinos, gambling problems are also on the rise. Gambling poses health and social risk to individuals and their families (Kalischuk et al., 2006; Wheeler, Round, and Wilson, 2010; Williams, Rehm, and Stevens, 2011). With the addition of new gambling products, casinos are now managing to target, market, and engage different community sectors, attracting more and more people into gambling. This leads to an increase in gambling problems. Problem gambling globally prevails among up to 5.3% of the population (Welte, Barnes, Wieczorek, Tidewell, and Parker, 2001; Cox, Yu, Afifi, and Ladouceur, 2005; Wardle et al., 2011).To mitigate the costs associated with gambling and to use it to advantage is important for any government to

find the various personality traits that lead to gambling and the factors that moderate gambling behavior. This research endeavors to find answers to these issues.

It is important to translate the issue into research questions to make it researchable and find a suitable solution. A research question is a logical statement derived from known facts and progresses to unknown facts that need clarification Lipowski (2008). The research questions need to be formulated considering the gap identified from the existing literature.

This research attempts to answer the following research questions:

1. What is the impact of personality traits on gambling motivation?
2. What is the impact of gambling motivation on gambling severity?
3. Does gambling motivation mediate the relationship between personality traits and gambling severity?
4. Does risk propensity moderate the relationships between personality traits and gambling severity mediated by gambling motivation?
5. Do subjective norms moderate the relationships between personality traits and gambling severity mediated by gambling motivation?

1.6 RESEARCH OBJECTIVES

Based on the research questions, broad objectives are framed to examine further the knowledge on the concept of personality traits and gambling motivation. In addition to identifying the personality traits, it was found necessary to study gambling motivation's influence on gambling severity. The study also examines the moderating effect of risk perception and subjective norms on the relationship.

This study puts forth the following objectives:

1. To test the relationships between personality traits and gambling motivation.
2. To test the relationship between gambling motivation and gambling severity.
3. To test the mediating role of gambling motivation in the relationship between personality traits and gambling severity.
4. To test the moderating role of risk propensity.
5. To test the moderating role of subjective norms.

1.7 RESEARCH PLAN

The research commenced by exploring the existing literature on gambling to obtain an extensive understanding of previously done work. The literature on human behavior and antecedents for behavior formation was reviewed from various fields. Gambling is an addictive behavior various other addictive studies, including substance addiction, was also reviewed. This helped to obtain conceptual clarity. Further extant literature related to the personality trait antecedents was reviewed to understand the potential research gaps and gain central knowledge, which would serve as a foundation for further research.

The literature on the antecedents of gambling motivation led to an understanding of personality traits' role on gambling motivation. In the second phase, further literature was reviewed to check the effect of gambling motivation on gambling severity. Dwelling further into literature, the influence of subjective norms on behavior and individuals risk propensity was reviewed to confirm these mediators' role on behavior.

Theories were explored during the next stage to obtain a strong theoretical base for the work. Self Determination Theory (SDT) and Social Cognitive Theory (SCT) were considered pertinent theories to investigate the research gaps. Hypothetical relationships were drawn based on these theories. The existing instruments to measure the constructs were reviewed and adopted in this study. The scales were tested for validity and reliability. The data collected using the tools were also tested for exploratory and confirmatory factor analysis.

The next stage involved the data collection process. The data for the quantitative study was collected by way of questionnaires personally administered to respondents. Valid and usable data obtained from 254 customers who visited casinos was analyzed using SPSS version 25 and SEM in AMOS version 25 to analyze the objectives of this study.

Further in the last stage, conclusions and managerial implications were drawn based on the hypothesized relationships.

1.8. ORGANISATION OF THE THESIS

The thesis has been organized into six chapters. A brief overview of each chapter is given below:

Chapter 1 Introduction: This chapter contains the background of the study, the significance of the study, purpose, scope of the study, research questions, research objectives, research plan, and the organization of the thesis.

Chapter 2 Literature Review: This chapter provides a comprehensive review of the existing literature on personality traits, gambling severity, gambling motivation, risk propensity, and subjective norms. Literature was reviewed to get a broad understanding of the concept and the work of previous researchers in this area. Due to this research's multi-disciplinary nature, literature from consumer behavior, psychology, marketing, management, personality, and gambling was reviewed, and the research gap was identified.

Chapter 3 Theoretical Foundation, Development of Hypotheses, and Measurement: This chapter discusses the theoretical base for this study, development of the conceptual model, the definition of terms, development of hypotheses.

Chapter 4 Research Methodology: This chapter provides an outline of the research methodology adopted in the study. It contains details of the development of the research design and approach, unit of analysis, data collection tools, sample size, data collection procedure, and data analysis procedure.

Chapter 5 Data Analysis: This chapter deals with analysis and results using Structural Equation Modeling using Amos Version 25 covering measurement and structural models, the mediating role of gambling motivation on the relationship between personality traits and gambling severity, and the moderation effect of risk propensity and subjective norms.

Chapter 6 Discussion and Conclusion: This chapter summarizes the result of the study, contributions of the study, managerial implications, and suggestions for future research work.

Chapter 2

REVIEW OF LITERATURE AND RESEARCH GAP

CHAPTER 2

REVIEW OF LITERATURE AND RESEARCH GAP

2.1 REVIEW OF LITERATURE

A review of literature is a summary of all the reviews from various research literature related to the current study undertaken from previous researchers. It is a search to assess what is known about the topic of study with a view to find a solution (Cameron et al., 2011). It helps to discover what is already known about the research problem and what has to be done more. A literature search helps to enhance rigour to the current study (Whittemore and Knafl, 2005). As the volume of completed research in the particular area expands, the researcher is constantly challenged to possess an accurate and current understanding of information pertinent to his or her area of practice and/or research (Russell, 2005). A thorough literature search will help in maintaining a current knowledge base in the particular research area (Andrew et al., 2008).

Literature review helps to identify gaps in current research, identify the need for future research, build a bridge between related areas of work, generate a research question, and identify a theoretical or conceptual framework. Literature review also helps in identifying various research methods used by previous researchers and approximate the best research methods to be used for the study (Andres and Carpenter, 1997). A literature review is "a critical summary of research on a topic of interest, often prepared to put a research problem in context (Baldwin, Woods and Simmons, 2006).

Thorough literature review was conducted to analyze the selected studies systematically in order to contribute to a better understanding of the research topic. Research gaps were identified from the potential directions for further research and theoretical and methodological propositions outlined from previous literature. This chapter provides a comprehensive view of the existing literature on gambling and related concepts. Literature was reviewed to get a broad understanding of the concept

and the work of previous researchers in this area. The process was begun by exploring the previous research studies to understand the findings and identify the gaps indicated by other researchers. The subsequent review was focused on exploring the research studies related to the antecedents of behavioral motivation followed by antecedents of gambling motivation. The researcher conducted a thorough literature review on gambling motivation and gambling severity to analyze gambling motivation's mediating role in gambling severity. Since important others play an important role in forming any behavior, the literature on subjective norms was reviewed. Finally, since gambling is considered risky behavior, literature from various domains relating to risk propensity was reviewed.

The related reviewed literature is presented under the following headings:

2.1.1 PERSONALITY TRAITS

Individual behavior to a great extend depends on personality traits. Previous research has identified various personality traits that affect individual behavior (Levin et al., 2002). Since personality is an important determinant of many kinds of behavior, it needs to be examined more closely while understanding human behavior (Roberts, B.W. et al., 2007). Personality traits like optimum stimulation level, optimism, and

self-esteem affect individual behavior (Fiore et al., 2001; Choy and Loker, 2004; Fiore et al., 2004; Wang and Liu, 2009; Latter et al., 2010; Kang and Kim, 2012; Park et al., 2013; Moon and Lee, 2014). Certain types of people are more vulnerable to gamble than others (Volberg et al., 2010). Personality differences play a role in understanding gambling behavior (Griffiths, 2006). Cognitive factors contribute to understanding gambling behavior and gambling disorder (Lavanco and Varveri, 2001; Joukhador, Blaszczynski, and Maccallum, 2004; Glicksohn and Zilberman, 2010; Capri et al., 2017; Lim et al., 2017). Analyzing individual differences in various personality traits will help clarify why certain people engage in gambling and continue their behavior (Benson, Norman, and Griffiths, 2012). This study looks at various personality traits that might influence an individual's motivation to gamble. Personality influences behavior through motivation (Barrick and Mount, 2005). This study tests the combined effect of personality traits like impulsivity, self-efficacy, optimism, self-esteem, and optimum stimulation level on gambling motivation.

2.1.1. A Optimum Stimulation Level

OSL is a personality trait referring to the amount of stimulation individuals prefer in life. The optimum stimulation level is considered an important factor affecting individual responses regarding cognition, affect, and behavior in various situations. A meta-analysis paper on optimum stimulation level by Gu et al. (2012) confirmed that optimum stimulation level has a strong explanatory potential while examining behavior. According to them, the optimum stimulation level has the power to predict human behavior. The optimum stimulation level is a stable psychometric trait referring to the amount of stimulation individuals prefer in life (McReynolds, 1971; Zuckerman, 1979). Optimum stimulation theory suggests that it is a personality trait that determines an individual's reaction to external stimulation (Raju, 1980). The literature on optimum stimulation level suggests that individuals have a preferred or optimum level of stimulation. Optimum Level of Stimulation (OSL) measures an individual's preferred level of stimulation perceived as the most satisfying and pleasant (Mowen et al., 2004; Steenkamp, 2010). Individuals' optimum stimulation level indicates the level of stimulation they require from the environment and their tendency to behave in a particular manner in the presence of the stimuli (Raju, 1980). Though the optimum stimulation level varies between individuals on an individual

basis, this preferred stimulation level is relatively constant over time as being rooted in an individual's general attitudes. It has been validated in different cultures (Steenkamp and Burgess, 2002).

Prominent motivational theories have ascertained that among the various traits leading to behavior, the need to attain the optimum level of stimulation holds utmost priority in deciding the behavior (Berlyne, 1960; 1978; Fiske and Maddi, 1961). Studies have established that the need for achieving the preferred level of satisfaction as the motivation to behavior. Optimum stimulation level can be used to segment consumers into various groups, and effective marketing strategies for promotion can be developed to suit these groups depending on their preference level (Palmgreen et al., 1995). Hence consumer behavior scholars have examined the concept of optimum stimulation in relation to behavior (Wahlers and Etzel, 1985; Steenkamp and Baumgartner 1992, 1995). Human behavior is directed to achieve the preferred level of stimulation by increasing or decreasing the novelty and complexity if they feel the current stimulation is not optimum (Roehl and Weber,2000). Understanding the relationship between personality traits and leisure activities could help marketers develop marketing strategies to attract customers based on their preferences (McDaniel, 2002). Individuals' emotional reaction follows an inverted U shaped pattern. The medial of the curve is considered the optimum stimulation level. Either side of the curve denotes high and low stimulation. People with higher optimum stimulation levels engage in high stimulation activities, wherein people low on stimulation will refrain from these activities. In other words, individuals with high optimum stimulation levels are lower in their arousal level. They are involved in thrilling and exciting activities or behaviors to obtain the required stimulation level. Individuals' behavior is motivated by the preferred level of stimulation. People achieve this preferred level by either increasing or decreasing the novelty and complexity when the environmental stimulation is not optimum (Mahatanankoon, 2007; Gu, Oh, and Wang, 2016; Utkarsh, 2017).

Compared to other personality traits, the optimum stimulation level has significant power to predict consumer behavior even more in exploratory behavior (Steenkamp, 2010). Research has established optimum stimulation level as an important antecedent for predicting consumer behaviors with strong exploratory components such as risk-

taking, curiosity, variety seeking, arousal, and evaluation of arousing stimuli such as fear-appeal ads (Celsi, Rose, and Leigh, 1993; Steenkamp, Baumgartner and Van der Wulp, 1996; Orth and Bourrain, 2005). Considering risky activities provide thrilling and exploratory experiences and people high on optimum stimulation level tend to get bored with routine activities and look for newer experiences, it is clear that people high on optimum stimulation level will engage in risky and diverse activities.

Researchers have studied optimum stimulation in different contexts of gambling. According to previous literature, the optimum stimulation level is related to the intention to gamble (Wolfgang, 1988), gambling frequency, and volume of gambling (Anderson and Brown, 1984; Dickerson, Hinchy, and Fabre, 1987; Kuley and Jacobs, 1988), loss of control (Coventry and Hudson, 2001). Gambling is associated with excitement, arousal, risk, and thrill (Coventry and Norman, 1997; Coventry and Hudson, 2001; Mowen, Fang, and Scott, 2009). The risk and uncertainty associated with gambling are highly arousing (Zuckerman, 1994). Given these characteristics related to gambling, people high on optimum stimulation level are expected to gain the required stimuli from gambling (Breen and Zuckerman, 1999). Association between optimum stimulation level and gambling has been investigated by researchers like Steenkamp and Baumgartner (1992). They found that individuals with higher optimum stimulation level (OSL) are more likely to gamble than those with lower optimum stimulation levels. This behavior can be attributed to the fact that risk associated with gambling increases physiological arousal, which is desired by those with high sensation needs. Imagine the arousal an individual gains after staking a huge amount; he has an opportunity to either win a bigger stake or losing his stake. This anxiety gives high arousal to the players (Moulard et al., 2019). Another situation gamblers experience is “near-miss outcomes” (Larche, Musielak, and Dixon, 2017; Stange et al., 2017), which means gambler comes very close to winning a bet but loses it. Another reason for the association between optimum stimulation levels and gambling is that individuals high on optimum stimulation are susceptible and expect positive outcomes from new and challenging situations (Maslowsky et al., 2011). They prefer new experiences that provide the required stimulation from the environment (Richard and Chebat, 2016).

Repetitive indulgence in a stimulating activity will normally take away the novelty. However, the extent to which a stimulus influences the behavior in question or triggers a change in unpredictable causes uncertainty even after repetitive indulgence (Berlyne, 1960). Individuals high on stimulation try and create more opportunities for themselves and indulge in learning maximum aspects of any stimulus. This will also lead to repetitive indulgence. While confronted with unfamiliar situations and activities, they are more receptive and comfortable and perceive more positive outcomes (Raju, 1980; Maslowsky et al., 2011). In the case of gambling activities, considering the reasons discussed, it is more likely people high on stimulation level will continue gambling to learn different aspects of gambling and the perception of positive outcomes in the future. Orth and Bourrain (2005) established the role of optimum stimulation in predicting behavior involving high risk and arousal like gambling.

2.1.1. B Self Esteem

Self-esteem is a personal belief or perception of how an individual is appreciated in the social world. Self-esteem is a general personality construct related to various positive and pro-social behavior (Leary and MacDonald, 2003). Self-esteem is how an individual perceives himself in society or among his settings. It is the extent to which a person values, approves, and likes oneself (Robinson, Shaver, and Wrightsman, 1991; Brown and Marshall, 2006). Self-esteem refers to a person's subjective or positive or negative evaluation of their worth as a person (Burger, 2006; Donnellan, Trzesniewski and Robins, 2011; MacDonald and Leary, 2012; Smith, Mackie and Claypool, 2014). It is our evaluation of our worthiness and our judgment that we are good and valuable people. According to William James, the founding father of Western psychology, our perception of our competence in domains is considered important (James, 1890). That means self-esteem is derived from the self-belief that we are good at things that are of significance. Self-esteem is the evaluative emotional component of the broader self-concept (Heatherton and Wyland, 2003). Self-esteem is the subjective evaluation one makes about self and his belief in his ability and importance (Wilson, Fornasier, and White, 2010). Self-esteem does not indicate people's talents and skills and also how others evaluate the individual. Though high self-esteem means setting high self-worth for oneself, in contrast to self-regard, self-

esteem does not indicate one's feeling of superiority to others (Rosenberg, 1965; Ackerman et al., 2011).

The effect of self-esteem on behavior is debated. Since research established connections between self-esteem and important life outcomes like substance addiction around 1980, there has been a considerable increase in research in this field. Self-esteem affects how individuals perceive the environment and behave with friends, family, and other important groups (Leary, 2004). Researchers like Ostrowsky (2010) have examined the association between self-esteem and behavior. Self-esteem has been associated with motivational and cognitive components (Kernis, 2003). A person with high self-esteem tends to be happy and self-respecting, while people with low self-esteem lack self-confidence and are mostly unhappy with their lives (Palermiti et al., 2017). This may be attributed to self-esteem levels. People high on self-esteem tend to believe they are important to society, and this feeling of theirs will help them eliminate the negative aspects of their life (Salomon, 2006). While high self-esteem is associated with positive emotions (Orth, Robins, and Widaman, 2012; Steiger, Allemand, Robins, and Fend, 2014) and prosocial behavior, low self-esteem is found to be associated with negative emotions, social problems like addictions (Leary and MacDonald, 2003) and anti-social behavior (Donnellan et al., 2005). People with high self-esteem engage in positive behavior since high self-esteem protects them from negative feelings (Taylor and Brown, 1988; Greenberg et al., 1992). The association between low self-esteem and addictive behavior has been established (Zimmerman et al., 1997). His successors affirmed his finding that low self-esteem is the basis for several problematic behaviors like an addiction (Greenberg, Lewis and Dodd, 1999; Griffiths, 2000; Sobell, 2007; Kim and Davis, 2009). Individuals with low self-esteem mostly experience negative emotions and engage in anti-social or addictive behavior (Goswick and Jones, 1981; Leary, 1983; Marlatt et al., 1988; Taylor and Brown, 1988). Individuals with low self-esteem involve in wrongdoings to escape from the feeling of inferiority, inadequacy, shame, and to enhance self-esteem (Jacobs, 1988; Ostrowsky, 2010). Craig and Mayo (1995) reported that people who hold negative evaluations about themselves use addictive substances or processes to escape or withdraw from their low self-beliefs.

Self-esteem can be used as a measure or barometer of individual success and failure and peoples' perception of their social worthiness (Baldwin and Sinclair, 1996). People with low self-esteem do not consider themselves worthy and easily bow to peer pressure, making them vulnerable to addictive behaviors. Their lack of self-worth forces them to continue their addictive behavior (Marlatt et al., 1988). Self esteem has been associated with various addictive behaviors like internet addiction (Armstrong, Phillips and Saling, 2000; Kraut et al., 2002; Sobell, 2007; Yang and Tung, 2007; Douglas, Mills, Niang et al., 2008; Kim and Davis, 2009; Meerkerk et al.,2010; Senol-Durak and Durak, 2011; Aydın and Sarı, 2011; Bozoglan ,Demirer and Sahin,2013; Park, Kang and Kim, 2014; Sariyska et al., 2014; Yen et al, 2014; Zhang, 2015; Błachnio et al, 2016; Mei et al, 2016), social media addiction (Steinfield, Ellison and Lampe, 2008; Zywica and Danowski, 2008; Gonzales and Hancock, 2011; Denti et al., 2012; Pantic, 2014; Błachnio, Przepiorka and Pantic, 2016; Błachnio, Przepiorka, and Rudnicka, 2016; Hawi and Samaha, 2016) smart phone addiction (Walsh, White, Cox, and Young, 2011; Lee et al., 2018) problem eating (McGee and Williams, 2000) substance addiction (Gerrard et al., 2000; Blank et al., 2016; Mirzairad et al., 2017; Birtel et al., 2017) gambling addiction (Volberg et al., 1997; Delfabbro et al., 2006; Griffiths, 2006; Kaare et al., 2009; González-Ortega et al., 2015) etc. The positive relation between low self-esteem and various addictions can be attributed to the low level of autonomy and self-control associated with low self-esteem (Ladd and Petry, 2002).

Self-esteem plays a major role in motivating people to engage in divergent behavior. They engage in these behaviors to increase their positive evaluation about themselves and protect themselves from harmful experiences (Kaplan, 1975; Thoits, 1994). Individuals low on self-esteem engages in high-risk activities to escape from reality. The association between low self-esteem and risky behavior has been established by researchers like (As¸c¸i et al. 2007; Bahaeloo-Horeh and Assari, 2008; Willig 2008).

Considering the above literature, it is likely that people who are low on self-esteem would get involved in gambling since it is a form of deviant and risky behavior. Sanscartier, Edgerton, and Roberts (2018) established that self-esteem is a major antecedent variable of addictive behaviors like gambling. Their study is an affirmation to various earlier researchers' works, who argued people low on self-esteem; engage

in gambling with a motive to escape and master the game, which will boost their self-esteem (Jacobs, 1988; Lapointe et al., 2013). At the initial stages, gambling will help people with low self-esteem to gain immediate gratification and also to divert their attention from the negative emotions (Taylor and Brown, 1988; Rosenthal, 1993) since they have the illusion that they can control the gambling outcome and also their destiny (Abt, Smith and Christiansen, 1985). They tend to increase their self-esteem with the initial wins (Ocean and Smith, 1993; Baumeister, 1997; Gupta and Derevensky, 1998a, 1998b; Beaudoin and Cox, 1999; Blaszczynski and Nower, 2002) since they consider gambling as a social activity and an opportunity to demonstrate their skills. They tend to continue in case of loss since they consider loss as a blow to their self-esteem, and regain their self-esteem, they try chasing the loss (Ho, 2017).

In disparity to the above studies, which established a negative relationship between self-esteem and addictions, Kim et al. (2008) found that a high level of self-esteem was positively related to online game addiction.

2.1.1. C Optimism

While studying behavior, it is important to assess an individual's positive and negative expectations regarding the future. This expectation is known as optimism and pessimism. Research on optimism and pessimism began during the mid-1980s (Carver and Scheier, 2014). Optimism and pessimism are stable personality traits that act as antecedents of action (Bryant and Cvengros, 2004; Gallagher and Lopez, 2009). How people react and deal with the adverse situation will indicate whether they are optimists or pessimists. Optimists and pessimists differ in their approach to life, how they view problems and deal with them, and how they deal with adverse situations. Optimism and pessimism are generalized confidence or doubt related to energy. It is confidence about life, and hence it is not situation specific (Scheier and Carver, 1992). The level of optimism or pessimism of any individual can be assessed by observing how they feel when they encounter problems (Carver, Scheier, and Segerstrom, 2010).

Optimism is a facet of inherently cognitive personality, which can be defined as a stable personality trait related to positive expectations regarding future events (Thomson and Mekoth, 2020). Optimism has been conceived and measured as a

dispositional personality trait (Carver, Scheier, and Segerstrom, 2010; Carver and Scheier, 2014). Optimists expect good outcomes even in adverse situations and have positive feelings, while pessimists tend to have negative expectations and tend to get anxious, angry, and sad (Carver and Scheier, 1998; Scheier and Carver, 1992). Optimism is an individual's mental attitude that reflects his confidence that the final result or outcome will always be positive (Avia and Va´zquez, 1999; Carver and Scheier, 2001; Chang, 2001).

Optimism is found to be useful in determining human behavior (Carver and Scheier, 2014). Optimism is considered an intuitive and cognitive motivational construct that needs to be examined while studying behavioral intentions (Peterson, 2000). Since optimism impacts individuals' perception of themselves and their environment and how they act in different situations, it is an important antecedent of behavior (Forgeard and Seligman, 2012). When faced with adverse conditions, optimists feel confident, and pessimists tend to become doubtful. Unlike pessimists, optimists believe that their future will be successful either with their hard work, luck, or even through help from others (Alarcon, Bowling, and Khazon, 2013). In other words, optimists expect to control the final result in the future (Gillham et al., 2001). Optimists socialize more than pessimists, which helps them lessen negative events and promote positive events (Brissette, Scheier, and Carver, 2002). Optimism leads people to engage in more efficient, positive, and valuable goals (Geers, Wellman, and Lassiter, 2009) and expect positive outcomes and foster these results without stress (Aspinwall and Taylor, 1997). This is an outcome of the optimist's belief that their future is fully dependent on their effort (Roth and Cohen, 1986). People tend to have a blend of optimism and pessimism. Therefore it is better to attribute this trait to greater or lesser degrees of optimism than optimists and pessimists.

Given the origin of the optimism construct in a broad view of motivation, it is natural that research has investigated its role in motivation-relevant outcomes in various life situations. Optimists tend to engage in challenging activities (Scheier and Carver, 1992). Differences in optimism among individuals are relevant in examining their risk-taking attitude at both individual and social levels. Individuals' level of optimism or pessimism influences their reaction to challenging and stressful events (Seligman, 1991; Carver et al., 2009). Optimists have a higher risk propensity when compared to

pessimists (Xie, 2001). Optimism affects risk-seeking behaviors such as gambling (Rogers, 1998; Gibson and Sanbonmatsu, 2004; Kuhnen and Knutson, 2011). Association between optimism and gambling has been investigated by many researchers like Blaszczynski and Nower (2002). Because of their generalized expectations for success, optimists may approach gambling with the belief that they can win (Tversky and Kahneman, 1971).

In case of adverse situations, optimists are known to increase goal engagement for those goals which they consider important and achieve them. At the same time, they decrease goal engagement if they do not consider that goal important (Geers et al., 2010). Gibson and Sanbonmatsu (2004) found that optimists continued gambling with their positive expectations even when they lost, unlike pessimists, who would withdraw in a similar situation. This can be attributed to optimist's illusion that they can control the situation and their belief that losers are almost winners Zakay (1996) and failures are due to external forces and are temporary (Seligman, 2011). Not all tasks have a positive outcome. Gambling is one such activity that does not have positive outcomes always, and due to this, optimism will become a liability if the gambler does not stop playing when the luck turns bad (Gibson and Sanbonmatsu, 2004). Optimists look for opportunities in every situation. They tend to underestimate the risk associated with gambling and do not take preventive measures in case of loss (Anderson and Galinsky, 2006). They tend to consider near wins as wins rather than losses and expect a positive outcome and continue gambling in adverse situations. Optimists may be more susceptible to the motivational effect of near wins in gambling. Given the optimist positive bias in ambiguity interpretation and propensity toward high-risk decision behavior, they are vulnerable to gambling severity.

Some researchers established a negative relationship between optimism and gambling motivation (Landers and Lounsbury, 2006; Conversano et al., 2010; Padykula and Conklin, 2010; Loo et al., 2014). Gambling might not be treated as an important activity by optimists since they are more realistic; hence, there are fewer chances of optimists becoming addicted to gambling (Thomson and Mekoth, 2020). Optimism is a psychological attribute that will safeguard individuals from addiction (Gillham and Reivich, 2004; Krentzman, 2013). Akhtar and Boniwell (2010) noted that since optimistic people, compared to their less optimistic counterparts, perceive life as more

pleasant and meaningful and become more resistant to addiction.

2.1.1. D Impulsivity

Impulsivity is a personality trait that can be analyzed by examining how people react when presented with various outcomes. People high on impulsivity will opt for immediate reward than greater delayed rewards (Ainslie, 1975). The lack of resistance to temptation leads impulsive people to look for opportunities that will give an immediate result even when they can choose another alternative that might have much greater rewards in a longer period. Impulsive people tend to make decisions without thinking of the consequences, resulting in negative outcomes. Researchers have studies impulsivity as a personality trait positively related to risk-taking (Levin and Hart, 2003; García et al., 2004). Making decisions without proper planning leads to risky outcomes.

Moeller et al. (2001) suggested that a comprehensive definition of impulsivity should include the following aspects like rapid action without considering the consequences, action without consideration to negative outcomes, lack of persistence for long-term results. Impulsivity has been defined differently, but the basic characteristics of impulsivity mentioned in the definitions are novelty-seeking and lack of planning and endurance (Verdejo-Garcia, Lawrence and Clark, 2008). American Psychiatric Association (2000) defined impulsivity as the lack of control on impulse or temptation to do something which might even be harmful. Impulsivity is a multidimensional construct associated with acting quickly without adequate thought or conscious judgment to achieve some goal without considering future consequences (Moeller et al., 2002). A widely-accepted definition of impulsivity is a "tendency to act spontaneously and without deliberation" (Carver, 2005). The term impulsivity has been used to refer to behavior that occurs before a full evaluation of a situation, an inability to inhibit responding, or a preference for immediate gratification. Impulsivity is those actions that are undertaken with no proper planning and are risky and inappropriate, which most of the time result in undesirable outcomes (Evenden, 1999). Behavioral studies stressed the need for immediate gratification as the major characteristic of impulsivity. Impulsivity is associated with a lack of planning, risk-taking, and rash decision making (Eysenck, 1985). Impulsivity is a multidimensional construct, and hence a good definition of impulsivity needs to include various aspects

for an actual understanding of the term (Brunner and Hen, 1997; Evenden, 1999). Impulsivity is associated with different aspects of behavior. Any definition should include all the characteristics attributed to impulsivity like immediate gratification, rash action, improper planning, and no concern for the consequences, negative outcomes, and risky decisions. The need gratification characterizes impulsiveness without thinking about the consequences (Patton et al., 1995; Kreek et al., 2005). Impulsiveness is one of the features of poor self-control (Gottfredson and Hirschi, 1990; Niemz et al., 2005; Kim et al., 2008).

Researchers examining the association between impulsivity and addictions have established that impulsivity operates the same way across various consumption disorders. Individuals tend to get attached to a particular product or process, which will lead to addiction in the long run. Impulsiveness or immediate gratification is a distinctive characteristic of addictive behavior (Saville et al., 2010). Addictive personality is characterized by sensation-seeking and impulsivity (Sarramon et al., 1999; Ko et al., 2006). People high on impulsivity are unable to persist temptations and react immediately, along with other characteristics of impulsivity (McCown et al., 1993). This attribute of impulsive individuals leads them to various addictions. Since they act impulsively without considering the consequences, there are fewer chances of getting out of addictive behavior. They tend to look for excitement and immediate gratification and be involved in behavior, which they consider exciting. Impulsivity is one of the personality traits associated with addictive behavior (Dawe, Gullo, and Loxton, 2004). Impulsive people are prone to developing addictions, including substance addictions and pathological gambling (Verdejo-Garcia, Lawrence and Clark, 2008). There are previous studies that examine the association between impulsivity and various substance addictions and process addictions. Researchers have established impulsivity as a significant predictor of multiple addictions like substance addiction disorders (MacKillop et al., 2011; Miller and Lynam, 2013; Jentsch et al., 2014), smoking addiction (Williams, 1973; Golding et al., 1983; Zuckerman et al.,1990; Jenks 1992), cocaine addiction (Moeller et al., 2001), alcohol addiction (Barnes et al., 2005), drug addiction (Sihvola et al., 2011; Levy et al., 2014), eating disorder and obesity (Mobbs et al., 2010; Murphy, Stojek and MacKillop, 2014), internet addiction (Beard and Wolf, 2001; La Rose et al., 2003; Yang et al., 2005; Cao et al., 2007; Meerkerk et al., 2010; Mazhari, 2012; Özdemir et al., 2014).

Several researchers have studied the relationship between impulsivity and risk-taking behavior since impulsivity is associated with immediate gratification, action without concern for consequences, and risky behavior. Impulsivity is associated with risky behavior and counterproductive decision-making (Hinson, Jameson, and Whitney, 2003). Gambling is an addictive behavior which involves huge risk. Gambling also provides entertainment and thrill to the players. Impulsive people may be at risk of developing gambling problems since gambling often involves a high degree of sensory and mental stimulation (Nower et al., 2004). Impulsive people are more prone to seek entertainments, which provides them quick and continuous stimulation. Impulsivity often is associated with antisocial and borderline disorders, attention deficit, substance use, and gambling disorders (Sharma et al., 2014). Studies have revealed that gambling addiction has similar personality characteristics to substance addiction and internet addiction. Considering these attributes of gambling, individuals high on impulsivity are more likely addicted to gambling. Several studies have revealed a positive relation between impulsivity and gambling. According to Tiego et al. (2019), impulsivity is the central construct related to gambling addiction. Previous studies have also established a positive relationship between impulsivity and gambling. A longitudinal survey of Vitaro et al. (1999) ascertained that impulsiveness predicted gambling behavior. Impulsivity is a marker of susceptibility to gambling behavior (Lai, Yip, and Lee, 2011).

Another group of researchers did not find a relationship between impulsivity and gambling (Donnelly and Barnes, 2005). Despite the contributions from previous studies, the influence of impulsivity on gambling severity and gambling is not confirmed (Cosenza and Nigro, 2015).

2.1.1. E Self Efficacy

The self-efficacy concept has been incorporated into social learning theory, and it has an enormous influence on psychological research. Self–efficacy is a central construct within the social cognitive theory. It is defined as an “individual’s beliefs in his or her abilities to execute necessary courses of action to satisfy situational demands” (McAuley et al., 2001). It is a completely different concept compared to intention. While self-efficacy is an individual’s perception that he or she can perform a behavior, the intention is the willingness to perform a behavior. In other words, self-

efficacy is not the actual capability; it is only the perceived capability. Self-efficacy does not deal with what capabilities one holds; rather, it is the belief that one has about what he can do (Bandura, 2007). In this sense, self-efficacy refers to the strength of conviction of possessing the ability. Bandura established that self-repossession influences people's behavior about the capability to perform a particular behavior, which is self-efficacy (Bandura, 1977).

Self-efficacy is often hypothesized to be a strong influence on behavior. Self-efficacy introduced in social cognitive theory is a very old concept attributed to an antecedent of motivation. There is a positive relationship between self-efficacy and motivation (Wigfield and Eccles, 1992). Since the self-belief in the ability to perform a behavior is the foundation of human motivation, self-efficacy is a predominant factor affecting human behavior (Bandura, 1997; 2006). The factors which boost human motivation are normally rooted in the core belief that one can make a difference with one's action (Bandura, 2010). Unless people believe they can perform a behavior, there are fewer chances of trying out the behavior in question. For example, if a person is not confident enough about driving, he will not even try to learn driving. Even if they begin to learn, they will immediately give up when faced with any difficulty rather than having preservers to master the behavior. As stated by Bandura (1998), if people have no belief in their ability to produce results, they are more likely to avoid situations they feel unable to handle. Contrastingly, self-assured individuals tend to put in more effort when they face setbacks, persisting until success is ultimately achieved.

Many researchers from thereon have agreed with his concept that self-efficacy is a major predictor of behavior (Holden et al., 1990; Holden, 1991; Multon, Brown and Lent, 1991; Sadri and Robertson, 1993; Stajkovic and Luthans, 1998; Moritz et al., 2000; Marks, Allegrante and Lorig, 2005; Hyde et al., 2008). Self-efficacy has gained popularity as a predictor of behavior since then (Williams, 2010).

Bandura (1997) poised that self-efficacy predicts the amount of effort individuals are willing to invest in a task and their persistence in adverse situations. Perception of personal efficacy plays a major role in controlling the motivation towards the behavior. Since self-efficacy is closely associated with goal setting, it serves as a means to cope with adverse outcomes (Bandura, 1998). Similarly, perceived self-

efficacy influences an individual's level of stubbornness (Bruning, Schraw, and Ronning 1999). Human motivation is cognitive, and individuals motivate themselves and act through forethought. They form beliefs about what they are capable of and set their goals within that limit. Theories like attribution theory, expectancy-value theory, and goal-setting theory are all built on these premises (Bandura, 2010). Individuals higher in self-efficacy set more challenging goals than individuals with lower self-efficacy since they believe they can handle the toughest situations.

Since self-efficacy is an individual's belief in his capabilities rather than his actual abilities, individuals overestimate or underestimate the actual capabilities. Boosting self-efficacy brings about positive changes in human behavior and persistence. There are some positive and negative consequences of wrongly estimating one's abilities. Overestimating might lead to persisting in behavior even when faced with adverse outcomes like gambling. Underestimating might lead to talented people not trying to achieve what they are capable of in reality. Self-efficacy leads to persistence in behavior and improvement through discrepancy creation. The discrepancy here implies people overestimating their capabilities and investing more effort to achieve higher goals. This implies that self-efficacy is directly related to motivation, effort, and performance. Self-efficacy enhances performance by increasing the effort and improving the persistence to achieve higher self-set goals. Self-efficacy theory argues a strong, positive effect of efficacy on performance (Bandura and Locke, 2003; Bandura, 2012).

The self-efficacy concept attracted many researchers considering addictive behavior since its introduction to social cognitive theory (Bandura, 1986; Palfai, 2002). Researchers like Lee et al. (2001) and Lin, Ko, and Wu (2008) have reported that self-efficacy has a strong relationship to addiction. Marlatt, Baer, and Quigley (1997) confirmed that high self-efficacy helps to prevent addictions. Various studies have examined the association between low self-efficacy and addiction in various contexts like eating disorders (Glynn and Ruderman, 1986), alcohol addiction (DiClemente, 1981; Annis, 1982; DiClemente, Prochaska and Gibertini, 1985; Skutle, 1999), drug addiction (Ellickson, Hays and Bell, 1992; Rounds-Bryant, Flynn and Craighead, 1997), internet addiction (LaRose, Lin, and Eastin, 2003; Lin, Ko and Wu, 2008; Iskender and Akin, 2010), digital media addiction (Young and Rodgers, 1997; Gunn,

1998; Baumeister, 1999; Kim and Davis, 2009; Khang et al., 2012), mobile phone addiction (Khang, Kim, and Kim, 2013; Chiu,2014). According to Griffiths (2013), who studied the role of self-efficacy on internet addiction, abnormal behavior, or consumption arises when individuals tend to have positive expectations and self-efficacy perception. This illusion will lead to compulsive consumption or behavior in the long run. Individuals high on self-efficacy will have the illusion that they can control the outcome. With this hope, they tend to continue to engage in risky activities even when the situation becomes adverse. Their perception that their self-efficacy will help them control the result will encourage them to continue even while losing. Minor wins will boost their self-efficacy since they attribute the entire outcome to their efficacy. That means people high on self-efficacy will hold a feeling of continuous rewards, and they engage in those activities more and more. Eventually, that will lead to problems. Self-efficacy has also been the best predictor of college students' academic achievements and their persistence to continue the course even after a failure (Wigfield and Eccles, 1992; Pajares and Kranzler, 1995; Pajares, 1996; Pajares and Graham, 1999; Pajares and Valiante, 2001; Robbins et al., 2004; Zimmerman and Kitsantas, 2005).

It's been observed there is a scarcity of research examining the relationship between self-efficacy and gaming addiction (Jeong and Kim, 2011; Petitta, Probst, and Barbaranelli, 2017). An attempt by Jeong and Kim (2011) to fill this gap found a significant relationship between self-efficacy and gaming addiction. Among the research available in self-efficacy and gambling addiction, the prominent ones are briefly explained further down. The following self-efficacy studies have shown an association between self-efficacy and gambling (Steenbergh et al., 2002; May et al., 2003; Raylu and Oei, 2004; Casey et al., 2008; Oei et al., 2008).

Considering that people with low self-efficacy do not persist in behavior when situations tend to become adverse, it is more likely individuals with low self-efficacy will quit gambling when their luck turns bad. On the other hand, individuals high on self-efficacy will continue gambling in adverse situations believing they can control the situation and recover the loss. Contradicting this assumption were the studies which established there is a negative relationship between self-efficacy and gambling. Martin et al. (2010) reported that low self-efficacy is a predominant determinate of

gambling frequency. The lower the self-esteem, the higher is the gambling frequency. Gamblers with low self-efficacy might continue gambling to master the game and boost their self-worth (Symes and Nicki, 1997). Another justification for the association between self-efficacy and gambling is that self-efficacy is an individual's belief about he or she can or cannot control gambling. People low on self-efficacy believes they cannot control their gambling and will not invest any effort to control, rather give in to the temptation. They attribute this addiction to their inability to control the temptation and increase gambling severity (Casey et al., 2008). Avolio et al. (2004) found that lower self-efficacy was associated with higher gambling problems, similar to the earlier measurement by South Oak Gambling Screen (Lesieur and Blume, 1987).In gambling studies, self-efficacy is considered as an individual's ability to control gambling when the situation becomes risky (Giroux et al., 2013).

2.1.2 GAMBLING MOTIVATION

Motivation is the force that activates, intensifies, and leads to behavior and persistence (Weiner, 1980). Motivation, when considered from the subjective perceptive, is quite a simple concept. It is as simple as people trying to get something since they want to have it. The want factor is the motivation that leads to behavior. Motivation and social orientation play an important role in determining an individual's future; hence their behavior is controlled by these forces (Steinberg, 2005; Reyna and Farley, 2006; Spear and Varlinskaya, 2010). Motivation is the underlying reason for people to engage in certain behavior. It is important to study the motivation leading to action to understand any form of behavior (Kelley and Berridge, 2002; Peters and Malesky, 2008).

Gambling motivations are important factors influencing gambling behavior. According to Vallieres (2001), gambling is a motivational consequence that leads people to become involved in gambling and invest a considerable amount of time and money in betting. Previous studies have established that gambling behavior is determined by different motives that lead people to be involved in different gambling activities. Gambling behavior is decided by the various motivational factors which lead people to be involved in the behavior (Vallerand and Thill, 1993; Chantal et al., 1995). Examining the gambling motivations will help analyze why people choose to gamble **(**Lee et al., 2006). Researchers have posited that psychological and social

motivations can be used to control gambling behavior, which indicates the importance of motivation on gambling behavior (Blanco et al., 2001; Toneatto, 2004; George, 2005; Wulfert et al., 2006; Stewart and Zack, 2008; Stewart et al., 2008; Breen, Hing and Gordon, 2011; Potenza et al., 2011).

Researchers following the functionalist approach (Smith et al., 1956) argue that gamblers follow a behavior program to fulfill their functional motives (Yee, 2006). Motivation to gamble arises from peoples' socio-economic and emotional need for self-concept and escape (Wan and Chiou, 2006; De Castell and Jenson, 2007). Motivation derives from the functional needs of the individual, and this motivation leads to gambling behavior.

Gambling is a heterogeneous activity, and gamble motivation varies between populations (Milosevic and Ledgerwood, 2010). Gambling motivation cannot be narrowed down to just one. Various motives work simultaneously to lead people to gamble. Researchers argue that entertainment, socializing, and escaping from stress are the main motivations to gamble, common to alcoholism (Cooper et al., 1992). But the external reinforcement which people look for from these two activities is quite different. People who gamble will require a high monetary reinforcement and place a bet on huge uncertainty to get the arousal they look for, which is not the case with alcoholism. Motivation to gamble might vary drastically among the general population (Lee et al., 2006). Incentive theory premise that motivation or want plays a major role in deciding the attractiveness of rewards from the behavior (Berridge and Robinson, 1998) can be applied in gambling too since gambling offers many rewards in financial gains, excitement, socializing, entertainment, etc.

There are various schools of researchers who have examined the motivations to gamble from different perspectives. Researchers have examined gambling motivation from a sociological perspective (Fisher, 1993; Jang et al., 2000) since they considered gambling a means of socializing. Another perspective given to gambling is the societal level approach, which considers gambling an activity to escape daily life (Jang et al., 2000). Researchers have considered gambling motivation from a psychological or socio-psychological perspective since specific motivations to gamble predict specific psychological characteristics of gamblers (Chantal, Vallerand, and Vallie` res, 1995; Tarras et al., 2000; Platz and Millar, 2001; Neighbors et al., 2002;

Park et al., 2002; Lee and Lee, 2003). For example, Chantal et al. (1995) and Jang et al. (2000) established that gambling activity's excitement motive and accomplishment motive lead people to become involved in gambling activity. Researchers considering the psychological perspective also examine the motivations of those who engage in gambling as leisure and tourism-related activity (Driver, Brown and Peterson, 1991). Researchers also view gambling motivations from an experiential consumption perspective to ascertain gambling behavior (Cotte, 1997; Loroz, 2004). Loroz established recreational gambling as experiential consumption, and hedonic consumption motives like fantasies, feelings, and fun are the major motivations to gamble.

Most of the previous studies have established the motivation to gamble depends on the type of gamblers. In gambling studies literature, gamble motivation has been studied according to gamblers' type (Platz and Millar, 2001; Lee et al., 2009). Gamblers are classified as recreational gamblers and pathological gamblers. Gambling motivations are mostly given a negative perception. Several researchers have attributed this to this school of thought (Lesieur and Blume, 1987; Shaffer et al., 1997; Volberg, 2001; Kim and Lee, 2004). Motivations normally given the negative perception are excitement, monetary motivation, escaping from daily routines, etc. Fun, fantasy, excitement, and socializing were considered positive motivations to gamble (Loroz, 2004).

Vallerand et al. (2003) stated that gambling motivations were associated with the type of passion. People with harmonious passion gamble for enjoyment, and they do have better control over their gambling behavior than people with an obsessive passion. In harmonious passion, people take up behavior that they consider to be important to them. The behavior is self-determined, and individuals can control these behaviors, unlike pathological gamblers **(**Back, Lee, and Stinchfield, 2011).

Many governments are adding gambling venues to their tourist attractions (Thomson and Mekoth, 2020). Researchers who consider gambling as a leisure activity (Klingemann, 1995) examine the positive perception of gambling motivations (Cotte, 1997; Jang et al., 2000; Tarras et al., 2000; Platz and Millar, 2001; Neighbors et al., 2002; Park et al., 2002; Loroz, 2004; Lee and Lee, 2005; Lee et al., 2006). This category is also known as non-problem gamblers. Leisure activities are those

activities that people consider as relaxing, entertaining, and engaging with no negative consequences. They engage to while away the extra time in hand and recharge themselves from stressful lifestyles. People who consider gambling a leisure activity will engage in it for entertainment, fun, and socializing (Hagen et al., 2005; Nower and Blaszczynski, 2010).

When people lose control of gambling and gambling becomes a compulsive behavior, they are regarded as problem gamblers. Stressful and emotional situations in an individual's life will evoke a tendency for a fast response, which means people tend to act without forethought. To relieve the stress or overcome the emotional situations, they resort to gambling and drinking activities, which will provide them with immediate gratification and external stimuli. This justifies the relationship between stress and gambling, which is considered an addictive behavior. Most of the studies examining gambling motivation focused on pathological gambling motivations rather than analyzing why people are involved in gambling as a form of leisure. Studies in the area considered escape motive one of the most important motives for pathological gamblers (McNeilly and Burke, 2001). Pathological gamblers who require immediate gratification choose easy but quick and risky means to earn money. They consider earning money through hard work in a longer period is inferior to achieving money quickly (Lesieur, 1992). Problem gamblers engage in gambling to avoid boredom, escape from daily life, and boost their low self-esteem (Raghunathan and Pham, 1999; Thomson and Mekoth, 2020). Other motivations are maintaining optimum stimulation level or receiving external stimuli to reach the required level of stimulation. People take the risk to induce arousal to convert negative emotions to positive moods (Raghunathan and Pham, 1999).

Another group of researchers separated senior gamblers and investigated their motivations to gamble. Seniors gamble for varied reasons, and there have been researchers who have examined the motivations for the senior population to gamble. Loroz (2004) claims the psychological benefits derived from gambling help improve the seniors' self-worthiness. Seniors who feel a loss of control over life events involve in gambling to regain their sense of control. They attribute every win to their ability, which in turn boosts their self-concept. Seniors also resort to gambling to escape physical and emotional constraints.

Some researchers have also established that the major reasons seniors visit casinos are good quality and inexpensive food offered by the casinos (Hope and Havir, 2002). Good quality food attracts retired seniors with fixed monthly income clubbed with the casinos' recreation facilities. The casinos' gaming and other recreational activities will help the retired people while away their time and monetary motivations have very little to do with their casino visits.

A study comparing gambling motives of male and female gamblers Lloyd et al. (2010) found mood regulation and enjoyment motives were higher among female gamblers than their male counterparts.

Theories of gambling motivation should describe gambler's motivational orientations and assess how gamblers interact with their environment. According to Self-determination theory (Deci and Ryan, 1985), individual motivational orientations emerge as a function of the interaction between basic psychological needs and the social contexts that either support or prevent them. Most studies in the field of gambling motivation are based on self–determination theory (Deci and Ryan, 1985) built on the premise that the higher the determination, the more positive will be the consequences (Chantal et al., 1995). Self-determination theory postulates that people have to be self-determined and efficient while dealing with their environment suitable for gambling. Their study established that gamblers with higher self-determination became more involved in gambling than people with lower self-determination. They also found that intrinsic motivations like excitement and accomplishment lead people with high self-determination to gamble while people low on self-determination gambled for external reasons. These arguments are based on the explanation that people are naturally inclined towards growth and trying out new things. Ryan and Deci (2000) view motivation as a dynamic and constantly developing process which includes intrinsic motivation and extrinsic motivation. Intrinsic motivation occurs when the specific activity (like gambling) inherently satisfies the needs for enjoyment and joy. Extrinsic motivation refers to behaviors or actions that enable attaining outcomes separate from inherent satisfaction with the action itself.

The present study considers gambling as an effect of motivation. Identifying specific motivational antecedents of problem gambling is pragmatic, so exploring gambling from established motivation theories may help research gambling motivation. Self-

determination theory focuses on motivations underlying human behavior and assumes that individuals have fundamental psychological needs for autonomy, competence, and relatedness. Deci and Ryan (1985, 2000) seem to fit this study.

2.1.3 GAMBLING SEVERITY

The widespread growth of gambling over the past few decades has created many social issues for governments. Many countries have undertaken studies to examine gambling's prevalence rate (Williams et al., 2012). Gambling-related problems like problems with spouses and other people, work-related issues, financial problems, and an increase in crime prompt governments to take corrective measures (Canale et al., 2016). It is important to examine the various factors which boost gambling severity to solve the issue. Gambling severity was defined as an increase in gambling with low risk but did not meet any criteria of DSM-IV or at-risk problem gambling (Potenza et al., 2011). Gambling severity has been conceptualized as a shift from controlled experimentation to uncontrolled, compulsive patterns of use. LaBrie et al. (2008) argued a group of highly involved gamblers spent substantially more time and lost more money gambling than did other gamblers. Auer and Griffiths (2012) defined gambling severity as the amount of money that players are prepared to risk when playing and that the metric of Theoretical Loss can measure this. Theoretical loss is the most accurate predictor of gambling severity. Theoretical loss is the product of bet size and house advantage for each game. Higher loss indicates higher gambling severity. According to them, the concept of ‘gambling involvement’ and ‘gambling severity’ is essentially the same.

Gambling is heterogeneous behavior, and the involvement in and severity of the behavior varies among the population. Personality traits predict gambling severity (Milosevic and Ledgerwood; 2010; Carragher and McWilliams, 2011; Nower et al., 2013). Human behavior is motivated by self-perception about the importance and consequences of the behavior. People who consider drinking as negative behavior will not be involved in drinking to maintain their self-concept. Similarly, gambling severity is also positively associated with the individual's gambling perception (Emond and Marmurek, 2010). Individuals who perceive gambling as harmful and risky will avoid gambling, while those who consider gambling an exciting leisure activity are involved in gambling. The perception of gambling having negative

consequences is associated with less gambling involvement (Hanss et al., 2014). The severity will be higher on individuals who enjoy the thrill and excitement derived from gambling activities. Neighbors et al. (2007) found that a favorable attitude towards gambling is positively correlated with negative consequences. Gambling behavior that will increase the chances of gambling-related negative consequences is considered risky gambling practices. Gamblers high on severity engage in risky gambling forms across various locations (Yip et al., 2011). They are not loyal to the location; rather, they are more concerned about the game itself, and since they look for different games, they visit other casinos that offer them variety.

Another group of researchers trying to analyze gambling severity has attempted to explore the various reasons apart from personality traits as predictors of gambling severity. Income and social status were found to be influencing gambling severity (Wilkinson, 2004; Wilkinson and Pickett, 2009). Gambling is considered a leisure activity among the aristocrats. People in high-income brackets resort to gambling as a social status quo and highlight their social hierarchy position. Gambling severity has also been studied as a consequence of psychiatric disorders and poor emotional functioning and coping (Grant, Desai, and Potenza, 2009; Yip et al., 2011). Other reasons for increasing gambling severity are early exposure to gambling, stress, impulsivity, high optimum stimulation level, and other environmental stimuli (Potenza, 2013). Hogarty et al. (2004) agreed to the association of gambling severity and early exposure to gambling. He suggested factors like poor academic performance, depression, and substance addiction also associate with gambling severity.

The following types of gamblers are more prone to increased gambling severity. Gamblers who gamble with psychological motivations like escaping from negative mood and stress (Blaszczynski and Nower, 2002; Nower and Blaszczynski, 2010; Mond et al., 2019), those who engage in gambling with monitory motives and positive expectancies (Lee et al., 2007; Nower and Blaszczynski, 2010; Spurrier and Blaszczynski, 2014), who engage in gambling for chasing (Lister, 2014), gamblers with high mental and physical health problems (Welte et al., 2004; Petry et al., 2005), gamblers with substance addiction (Martins et al. 2004; Dannon et al., 2006; Wenzel and Dahl, 2009) gamblers with high anxiety and mood disorders (Wenzel and Dahl,

2009).

Individuals high on gambling severity were identified by the amount of time spent on gambling, the type of games engaged in, and how much they discussed gambling with other people. Devoting a considerable amount of productive time and discussing gambling-related topics were identified as gambling severity characteristics (Lopez-Gonzalez, Estévez and Griffiths, 2019). Rodgers et al. (2009) established gambling frequency as the major predictor of gambling, while Yip et al. (2011) considered the amount of time invested in gambling as the prime predictor of gambling severity.

Individuals high on gambling severity also looked for games where the outcome was known faster than other games where they had to wait longer to find out the outcome. Since people high on severity are known to be highly impulsive, they need immediate results. Individuals high on gambling severity engaged in games where the bet cycles are brief, and the gap between the placement of the bet and outcome is shorter (Griffiths and Auer, 2013; Lamont et al., 2016).

Many gamblers consider winning as the primary motivation to gamble (Ladouceur et al., 2002; Neighbors et al., 2002; Park et al., 2004; Wood et al., 2004). Individuals who consider gambling as a quick and easy means of money-making will resort to gambling with greed and continue to do so in the hope of positive luck in the future. Gambling severity is associated with the misconception that gambling is an income source earned with minimum or no effort (Walker, 1992). These irrational beliefs and the fallacy of randomness of winning lead individuals to the impression that persistence will result in a huge gain, which leads to excessive expenditure, which is increased severity in gambling (Gaboury and Ladouceur, 1989; Manoso et al., 2004).

Gambling severity is positively associated with substance addiction and varies among different gambling motivations (Yip et al., 2011). Their study, too, speaks about the influence of substance addiction on gambling severity. They also supported previous research that established a positive association between academic performance and gambling severity. Gambling severity and substance addiction is found to have a bi-directional relationship. Researchers have shown that substance addiction increases gambling severity (Welte et al., 2004). Another school of researchers has established gambling severity increases substance addiction (Kyngdon and Dickerson, 1999;

Ellery et al., 2005; Yip et al., 2011).

Researchers have measured gambling severity using various concepts like the size of the bet, frequency of gambling, the number of games played, etc. The need to gamble with a huge amount of money over a while to experience the same level of excitement indicates an increase in gambling severity according to the Diagnostic and Statistical Manual of Mental Disorders (4th ed.; APA 1994). Borrowing money to gamble is a clear indicator of increased gambling severity (Engwall et al., 2004). Chasing behavior and unpleasant arousal states are also indicators of increased severity (Bouju et al., 2014). The amount of money spent on gambling and the frequency are indicators of increased gambling severity (Hing et al., 2016).

Gambling on different games is associated with increased severity, and men typically gamble on more games than females (Welte et al., 2004; Wenzel and Dahl, 2009; Svensson et al., 2011; Gainsbury et al., 2014). Men are also more likely to gamble more frequently and with a higher amount (Hing and Breen, 2001a; b).

The percentage of income spent on gambling and the gambler's tolerance level are also indicators to measure gambling severity (Miller and Currie, 2008). They claim that the perception of the gambler and his gambling practices also affect gambling severity. Earlier researchers have examined the association between gamblers' perception and gambling severity. Gamblers with irrational gambling perception are at higher risk of increased gambling severity and spend more money on gambling (Delfabbro and Winefield, 2000). Contradicting all this research was the study by May and colleagues (2005), who argued gambler's perception, had no relation with gambling severity. Cloutier and colleagues (2006) found the number of games played has no association with gambling severity.

For this study, the above factors and chasing and health-related issues originated from gambling were considered for measuring gambling severity.

2.1.4 RISK PROPENSITY

Risk means different things to different people, and risk understandings are learned by socially and culturally structured conceptions (Boholm, 1998). Risk has been defined in several ways but is always seen as the likelihood of danger that an individual will

experience (Clarke and Short Jr, 1993). Rosa (2003) defined risk as "a situation or an event where something of human value (including humans themselves) is at stake and where the outcome is uncertain."

Risk propensity is a central construct in consumer behavior. Risk propensity is an individual's attitude to take or avoid risk (Sitkin and Weingart, 1995). While risk attitude is the mindset towards taking or avoiding risk when deciding how to proceed in situations with uncertain outcomes, risk propensity is a broader concept, and it comprises of various dimensions like risk-taking attitude, risk perception, and price consciousness (Dholakia, 1997; Teas and Agarwal, 2000). While risk aversion is the attitude to avoid risks, risk propensity is an individual's attitude towards taking a risk (Rohrmann, 2005).

Among the theories and studies published on risk propensity, the most important one is the modeling set out by Sitkin and Pablo (1992). This model considers risk perception and risk propensity as the factors forming the risk-taking attitude of people. Risk perception is the individual's interpretation of risk based on his cognitive ability and experience, wherein risk propensity is the individual's tendency to take or avoid risk. Individuals who perceive a higher risk in a particular situation will make less risky decisions to prevent negative consequences. Those who perceive lesser risk will consider the situation as an opportunity to make a fortune and make more risky decisions (Sitkin and Wiengart, 1995).

There are contradictory findings of risk propensity (Huff et al., 1997). Much empirical and theoretical research has also not reached a consensus on the construct's nature (Pablo, 1999). While some researchers considered personality traits as antecedents of risk propensity (Conchar et al., 2004), others argued that risk propensity is an antecedent of personality. They established that individuals' attitudinal factors are based on their inherent risk propensity (Nicholson et al., 2005).

Extant literature suggests that risk propensity is a multifaceted personality trait. Risk propensity is considered a general personality trait that acts as a base for risk-seeking or risk-averse behavior consistent across situations (Ghosh and Ray, 1997; Rowe, 1977; Fischhoff et al., 1981; Keinan et al., 1984; Wolman, 1989). The risk propensity literature has been dominated by assuming that one's risk propensity is a stable

personality trait (Bromiley and Curley, 1992; Wang, Kruger and Wilke, 2009). This theme relates risk propensity to personality traits and argues that individual risk propensity is related to an individual than the situation. Zuckerman et al. (1964) introduced this concept, and other researchers confirmed this relation (Cloninger, 1996; Zuckerman, 1974; Farde et al., 1997; Geen, 1997; Zuckerman and Kuhlman, 2000; Mishra and Lalumière, 2011). A relatively smaller group of researchers found that people displayed consistent response on different domains of risk (MacCrimmon and Wehrung, 1984; Gerrans, Faff and Hartnett, 2012), and these people could be either constant risk seekers or consistent risk averters (Fagley and Miller, 1987; Weber and Milliman, 1997). Individuals who are inconsistent in their risk-taking decisions could be considered as lacking a strong risk propensity to either take or avoid risk. Personality researchers still debate on whether risk propensity is a personality trait. Researchers are of varied opinion, while some consider this a personality trait while others argue that risk propensity cannot be considered a personality trait (Levenson 1990; Bromiley and Curley, 1992; Trimpop et, 1994; Pennings and Smidts, 2000).

Others consider risk propensity as a domain-specific construct that varies between situations (MacCrimmon and Wehrung, 1990; Keil et al., 2000; Weber et al., 2002). These researchers argue that individuals' risk propensity depends on the situation, such as investment and gambling. This theme relates to the prospect theory (Kahneman and Tversky, 1979), proposing that risk propensity is a domain-specific concept. An individual might take risks in some situations while avoiding risk in other conditions. Researchers also do not have a single opinion on if risk propensity is a general construct or dimension-specific construct (Nicholson et al., 2005). Rohrman (2005) concluded that risk propensity is not a uni-dimensional personality trait. Risk propensity is influenced by the type of risk involved, the individual's motivation for engaging in the behavior, social influence on the individual, and most importantly, the individual's personality characteristics.

Another group of researchers considers risk propensity as an individual's tendency to act in a particular manner in a specific time (Sitkin and Pablo, 1992; Sitkin and Weingart, 1995; Pablo, 1997; Wong, 2005). This means risk propensity is a personality trait that reflects an individual's attitude towards risk and can evolve as

the decision-maker gains more experience. A simple example would be of a new driver; once he gains confidence, he will drive faster than while he was mastering it. This shows a difference in the individual's attitude towards the same risk at different intervals of his life with a different experience.

Since there is no conceptual clarity, there is an ongoing debate regarding an appropriate scale to measure the construct (Schonberg et al., 2011; Friedman et al., 2014) and conceptualize it as a general or a domain-specific trait (Weber, Blais and Betz, 2002). Economics measures risk propensity from the individual's choices between monetary lotteries (Markowitz, 1952; Holt and Laury, 2002). Sociology integrates the social context and measures risk propensity depending on outcomes and probabilities depending on other people (Berg, Dickhaut, and Mc-Cabe, 1995; Fehr et al.,2002; Ben-Ner and Halldorsson, 2010; Houser, Schunk and Winter, 2010; Lönnqvist et al., 2011; Nickel and Vaesen, 2012). Psychology captures behavioral measures including monetary aspects and risky and physically harmful behavior and other risky outcomes of a decision (Bechara et al., 1994; Lejuez et al., 2002; Hertwig and Erev, 2009). Depending on the concept of risk propensity, various scales are used to measure the construct. There are general risk propensity scales that measure risk propensity as a stable construct, and it assesses an individual's risk propensity towards multiple types of risk. Domain-specific risk propensity scales measure an individual's risk propensity in varied risky situations. Jaworski and Kohli (1993) assessed general risk propensity among managers on organizations' market orientation. Kapteyn and Teppa (2002) assessed Domain-specific risk propensity in financial decisions. Weber et al. (2002) developed a risk propensity scale that could be used across multiple domains like social decisions, investing, and gambling.

Risk propensity depends on the individual's motive, irrespective of the general approach or domain-specific approach is being used (Meertens et al., 2008). One of the characteristics of people with high-risk propensity is their tendency to engage in risky behavior, which has chances of loss and win like gambling and investment (Josef et al., 2016). The role of risk propensity in decision making and in determining the eventual outcomes has been a concept of interest to researches over a while (Bromiley, 1991; Jaworski and Kohli, 1993; Kahneman and Lovallo, 1993; Sitkin and Weingart, 1995; Keil et al., 2000; Lauriola and Levin, 2001; Kapteyn and Teppa,

2002; Mukherji and Wright, 2002; Bendoly et al., 2006; Martinez and Artz, 2006). Previous researchers have examined the influence of risk propensity on various behaviors. People who engage in substance use are learned to have higher risk propensity (Aklin et al., 2005; Lejuez et al., 2005; Fernie et al., 2010; Williams et al., 2010). A similar influence of risk propensity is noticed in gambling behavior too (Miedl et al., 2014). Risk propensity has a positive relationship with alcohol addiction (Heinz et al., 2016; Clay et al., 2018; Del Casale et al., 2019). These researches established that individuals' risk propensity plays an important role in predicting their cravings.

The influence of risk propensity on risk-taking behavior is well established (Hamid, 2020). Since risk propensity is the willingness to take a risk, it will affect the actual risk-taking in the long run (Brockhaus, 1980; MacCrimmon and Wehrung, 1984). Risk propensity construct plays an important role in theoretical modeling of risk behavior and understanding individual motivations to engage in risky behavior. Engaging in risky activities based on a rational evaluation of the outcomes and risk propensity is the individual's predisposition towards risk (Bromiley, 1991).

Risk propensity influences risk-taking behavior in general, and considering the nature of risk involved, studies on gambling will not be complete without examining the risk propensity. Gambling has been associated with various forms of risky behavior and a general risk acceptance pattern (Martins et al., 2004; Van Brunschot, 2009). Engagement in risky behavior is guided by perceptions of the degree of risk entailed. Some individuals are prone to perceive recognized risks as attractive, while others find the same perceived risk level as aversive.

Del Casale et al. (2019), who claim their study to be the only other examining the moderating role of risk propensity on behavior or intention, established the moderating role of risk propensity on the relationship between affect alcohol cravings. According to them, higher risk propensity will strengthen the relationship between affect and alcohol craving. Their finding is in line with the only previous finding, which established a moderating role of risk propensity on the relationship between stress and alcohol craving (Clay et al., 2018). This study supports the fact that higher levels of risks accentuate the relationship between gambling motivation and gambling severity.

2.1.5 SUBJECTIVE NORMS

Subjective norms refer to the perceived social pressure to engage in behavior based on individuals' perceptions of what other people want them to do (Manning, 2009). Subjective norms indicate an individual's perceptions of the expectation from his or her social relations. It also reflects his perception of whether important others want him to perform or not perform a particular behavior. Few studies have examined the interaction between attitude and subjective norms on behavioral intention. However, Ajzen (1991) argues that behavioral intention is a joint function of attitude toward the behavior and perceived subjective norms.

Subjective norm is perceived pressure imposed by significant others like family, friends, and peers to perform or not perform a behavior (Ajzan and Fishbein, 1980; Khalil and Michael, 2008). This perception influences behavior. It is an individual's perception of the expectation of those who are significant to him or her. Subjective norm is the belief that a person or persons relevant to you approve and support behavior. It is the perceived social pressure for individuals to act in a particular manner, trying to comply with social relations. It is the feeling of concern about what relevant others will like you to do. Since individuals want to be in an amicable relationship with significant others, they try to behave in a manner that is acceptable to significant others (Cialdini et al., 1991; White et al., 2009; Comber and Thieme, 2013). Important others vary from person to person. While some consider family members important, others may give importance to friends, yet another group might consider colleagues' opinions most important. A subjective norm is a personal perception of behavior that is influenced by referent groups. The belief about the referent group's opinion is a normative belief which motivates people to engage in a behavior. Individuals tend to perform those behaviors which are approved by others. Subjective norm is the sum of normative beliefs and individual motivation to comply.

Prominent theories dealing with behavior and antecedents of behavior consider subjective norms as an important predictor of behavior. The theory of reasoned action (Fishben and Ajzen, 1975) postulates subjective norms and attitude as the determinants of behavior (Bagozzi, Moore, and Leone, 2004) while the theory of planned behavior (Ajzen, 1991) considers attitude, subjective norms, and perceived behavioral control for predicting behavior (Armitage and Conner, 2001; White et al.,

2009). Social learning theory (Bandura, 1997) proposes that relevant others' influence, known as social influence, positively impacts behavior. The positive association between subjective norm and behavior was further confirmed by other researchers (Bagozzi, Dholakia, and Pearo, 2007; Manning, 2009; Karaiskos et al., 2010). It has been established that Chinese people's behavior is primarily influenced by subjective norms rather than attitude (Bagozzi et al., 2000).

The influence of subjective norms on various behaviors has been researched. Subjective norm is found to have a positive effect on online buying behavior (Khalil and Michael, 2008; Amoroso, 2009; George, 2011; Supanat, 2012; Hasbullah et al., 2016), virtual advertising (Zhang and Mao, 2008; Shan and King, 2015), purchase of environmentally friendly products (Biel and Thøgersen, 2007), acquisition of organic foods (Vermeir and Verbeke, 2006; Chen, 2007), recycling intention (Huffman et al., 2014), e-learning (Cheung and Vogel, 2013), substance use (Patel and Fromme, 2010) and gambling (Wickwire et al., 2007). Kumar (2012) found subjective norms are not significantly related to the purchase intention of environmentally friendly products.

Krueger, Reilly, and Carsrud (2000) argued that subjective norm does not influence behavior like establishing a new business. This was further verified by Armitage and Conner (2001). Rivis and Sheeran (2003) posited that descriptive norms would predict social relations attitude about any behavior. While subjective norms are your perception about what others want you to do, descriptive norms are behaviors that social relations engage in. Subjective norms can be approached from two different angles. The first approach is the perception of what the group of important people wants you to do, and the second concept is what the group of important people does. There are occasions where people are not concerned with what the referent group thinks; rather, they are concerned about what the referent group does. This means people consider other peoples' opinions and behavior to decide on acceptable behaviors (Rivis and Sheeran, 2003).

Researchers are of varied opinion regarding the influence of subjective norms on behavior. Some researchers found subjective norms have a very weak role in predicting behavior (Hartwick and Warshaw, 1988; Sparks et al., 1995; Armitage and Conner, 2001) and in contrast, the strong positive relationship between subjective norms and behavior is supported by many empirical studies (Schmitz and Fulk, 1991;

Fulk, 1993; Trafimow and Finlay, 1996; Povey et al., 2000; Lam et al., 2003; Cheung and Vogel, 2013). Some researchers have established that subjective norms influence behavior indirectly through other variables (Ryu and Jang, 2006; Han and Kim, 2010; Shin and Hancer, 2016).

As a general rule, more favorable subjective norms will motivate people to perform a particular behavior (Ajzen, 2002). This will hold when applied to gambling behavior too. Numerous researchers have established a positive association between subjective norms and gambling behavior (Moore and Ohtsuka, 1997; 1999; Sheeran and Orbell, 1999; Oh and Hsu, 2001; Larimer and Neighbors, 2003; Miller and Howell, 2005; Neighbors et al., 2002, 2007; Martin et al., 2010; Wu and Tang, 2012). Fishbein and Ajzen (2010) contended that negative normative belief would reduce intention to gamble; if the individual perceives that his significant others oppose gambling, there are fewer chances that he will engage in gambling. A study among the Chinese population also confirmed the approval of family and friends, and their participation in gambling has an important influence on gambling behavior. Martin et al. (2010) found that though family and friends' approval were important predictors of gambling, acceptance from peers did not affect gambling behavior. There are contradictory findings that postulate subjective norms have only a minor effect on gambling behavior (Wu and Tang, 2012).

The moderating effect of the subjective norm is not widely researched. There are very few studies examining the moderating role of subjective norms on behavior. Researchers have started to explore the moderating effect of subjective norms very recently. Rivis and Sheeran (2003) established the moderating impact of descriptive norms on intention and behavior. Lam, Baum, and Pine (2003) examined the moderating role of subjective norms on job satisfaction and turnover intention in the tourism industry in Hong Kong. They found that subjective norms have a strong negative influence on turnover behavior. This implies that their intentions to leave were reduced when those important to them thought they should not quit. Shan and King (2015) examined the moderating role of subjective norms on attitude and behavior related to viral advertising. They found subjective norms influenced the relationship between attitude and behavior. Subjective norms boosted viral advertisement sharing among people. Individuals who considered their peers

important shared more viral advertisements among the community than those lower on subjective norms or those who did not consider other people's impressions about you.

Serving as perceived social pressure, subjective norms may moderate the relationship between attitude toward gambling and the intention of gambling. This study examines the moderating effect of subjective norms on the relations between gambling motivation and gambling severity.

The most widely used measure of gambling-related subjective norms is items borrowed from the Subjective Norms: Family and Friends Scale (Moore and Ohtsuka, 1997). The scale asks how strongly the respondent agrees or disagrees on a five-point Likert scale for statements about how their family and friends feel about gambling. There are twelve such statements in the scale. (E.g., my family members visit gambling destinations, most of my friends approve of my gambling, most of my friends gamble occasionally).

2.2 RESEARCH GAP

Most of the gambling studies are dealing with problem gambling at the high end of the gambling severity (Calado, Alexandre, and Griffiths, 2017). People engage in gambling as a form of leisure, and only less than 4% of gamblers qualify as pathological gamblers (Canadian Partnership for Responsible Gambling, 2016). This study explores the various personality traits leading to gambling motivation contemporaneously while to date, there has been no study considering many personality traits together. Earlier studies have considered single personality trait as the antecedent of gambling. Researchers like Ioannidis et al. (2019), Chamberlain et al. (2019), Yücel et al. (2019) and Potenza, Higuchi, and Brand (2018) studied the association between impulsivity and problem gambling. Influence of optimum stimulation level on problem gambling was studied by earlier researchers like Mowen, Fang and Scott (2009), Delfabbro (2000), and Dickerson and Baron (2000). Clark et al. (2009), Côté et al. (2003), Gibson and Sanbonmatsu (2004),Hajcak et al. (2007) and Dillard, Midboe and Klein(2009) examined the relationship between optimism and gambling addiction while Francis et al. (2015), Gandolfo and De Bonis (2015), and Lam (2007) examined the relationship between self esteem and problem

gambling. The relationship between self efficacy and pathological gambling was studied in the past by various researchers (Casey et al. 2008; May et al. 2003; Raylu and Oei , 2004; Oei et al. 2008; Steenbergh et al. 2002). Previous studies have related personality traits either with gambling motivation or with gambling severity. This study considers the combined effect of multiple personality traits and relates them to gambling motivation and gambling severity in a single model. Studies related to gambling behavior have been popular only in selected parts of the world. Hence, additional studies should be conducted in other contexts where gambling has been legalised in the recent past with easy access to the local population (Bastiani et al., 2013).

Sitkin and Pablo (1992) defined risk propensity as an individual's tendency to take or avoid risk. Existing literature has viewed risk propensity as an antecedent of gambling behavior, helping in cessation or controlling gambling severity (Binde, 2009). Extant literature has not treated risk propensity as a moderator variable and. Hence this study fills this gap by identifying risk propensity as a moderator, which accentuates or retards the relationships among personality traits, gambling motivation, and gambling severity.

Subjective norms refer to an individual's perception about what other people important to him/ her think of a particular behavior, whether they will approve or disapprove of the behavior (Manning, 2009). Despite the significance of subjective norms on consumer behavior, there is a scarcity of research testing the effect of subjective norms on behavior (Wickwire et al., 2007; Ariyabuddhiphongs, 2013; Jackson et al., 2015; Canale et al., 2016). Serving as perceived social pressure, subjective norms may moderate the relationship between motivation to gamble and gambling severity. This study examines the moderating effect of subjective norms on the relations among personality traits, gambling motivation, and gambling severity.

Thus this study identifies the gaps in the measurement of gambling severity, simultaneous impact of multiple traits, mediating role of gambling motivation, and the moderating role of risk propensity and subjective norms.

Chapter 3

THEORETICAL FOUNDATION, DEVELOPMENT OF HYPOTHESES AND MEASUREMENTS

CHAPTER 3

THEORETICAL FOUNDATION, DEVELOPMENT OF HYPOTHESES AND MEASUREMENTS

The conceptual framework guiding this research work is based on Self Determination Theory (Deci and Ryan, 1985; 2000) and Social Cognitive Theory (Albert Bandura, 1999; 2001). Self-determination theory is a macro theory of human motivation that is concerned about the motivation behind human behavior. It is most apt for this study since the research explores personality trait antecedents (optimum stimulation level, self-esteem, optimism, impulsivity, and self-efficacy) on gambling motivation. Social cognitive theory is considered apt in this work since the premise on which the theory is built, the socio-structural opportunities and limitations regulate human behavior. The researcher further aims to explore the moderating effects of subjective norms and risk propensity on gambling severity.

3.1SELF DETERMINATION THEORY - SDT (DECI AND RYAN 1985; 2000)

Research analyzing human behavior has to focus on basic psychological motivation since behavior is an outcome of motivation. Self-determination theory differs from other motivation theories, such as McClelland's (1965) acquired needs theory, which postulates that achievement is acquired via socialization and learning throughout the life span. Self-determination theory conceptualized the need for achievement and well-being as an innate, fundamental human need. Self-determination theory posits that various needs are present in every individual and they all enjoy equal importance. Self-determination is a theory of personality and human motivation which deals with psychological needs and behavior tendencies. This theory examines the motivational factors which influence human behavior. Individuals tend to behave in a manner which they consider most interesting and suitable for them. Self-determination theory helps explain the factors which encourage people to engage in various behaviors that are of interest to them and help them achieve well being. According to this theory, the effort a person exerts in any behavior depends mostly on his need for satisfaction. Self-determination, the most widely used theory of human motivation, emphasizes

that the motivation's quality determines the behavior more than the motivation's quantity. Therefore self-determination theory is applied in this research to gain an insight into gambling behavior.

Self-determination theory focuses on the extent to which human behavior is self-motivated or self-determined. This theory, in the initial stages, grouped human motivation to intrinsic and extrinsic motivation. Intrinsically motivated people engage in activities for the activity's entertainment value compared to extrinsically motivated people who engaged in the activity for an external outcome. Self-determination theory suggests that individuals' inclination towards psychological growth is manifested by intrinsic motivation or engagement in activities that they consider interesting and enjoyable without external reinforcement. Intrinsically motivated people engage in challenging behavior to master the behavior. Self-determination theory explains the dominant role of intrinsic motivation in forming human behavior. Gambling is an enjoyable and challenging activity, which can be explained through the self-determination theory. This theory also established that intrinsic motivation is derived from the entertainment and enjoyment value of gambling.

The theory's evolution expanded intrinsic motivation further into three types; autonomy, competency, and relatedness. All these three needs are essential, and a disruption of any of these needs will affect an individual’s well-being. Other need theories consider a hierarchical model of needs. The strength of the need might vary in different individuals. The need for autonomy means an individual’s need to be solely responsible for his behavior rather than being pushed or pulled by external forces. Earlier research on self-determination focused on autonomy and is the most controversial among the three basic psychological needs for motivation. It does not mean that the behavior needs to be turning down others' desires; it simply implies the need to act with a sense of choice. Competence motive is the need to feel a sense of mastery of the behavior. It is a sense of achievement that an individual feels and a sense of mastery over the behavior and the feeling to try new things. The need for competence is an inherent human nature that motivates people to explore optimal challenges. The need for competence is also a concept of the social cognitive theory, which considers self-efficacy as the primary motivational principle. The need for relatedness means the need to be connected to others. This is accomplished when

people see themselves as a member of a group and develop close relationships. Human beings are considered social animals. It is important to feel like a part of a community, and people tend to associate themselves with those groups which value their opinion and consider them as important. It is quite human to be in the company of like-minded people. People who enjoy art will associate themselves with others who also have an interest in art. Those who enjoy consuming alcohol will look for the company of others who drink, and gamblers associate themselves with other gamblers since many others might not appreciate this behavior.

Individuals engage in behavior for reasons other than the entertainment and enjoyable value attached to the behavior itself. These motivations are known as extrinsic motivations. Extrinsic motivations are of two different types. External motivations are those which force individuals to engage in a behavior, like punishments or anticipation of rewards. People engage in gambling with an external motivation of reward, winning an easy and fast fortune through gambling. Introjected motivations force people to engage in a behavior for the feeling of pride or avoiding shame. Some gamble for the sense of achievement and pride of winning and mastering the game. They find it thrilling to win and consider the wins at the casinos as an achievement or matter of pride since they feel the victory is attributed to their mastery of the game. Some others engage in gambling to avoid the feeling of rejection from family and friends. This dimension of extrinsic motivation is regarded as introjected motivation.

An immediate behavior change is generally motivated by extrinsic motivation. Many gamblers try out gambling for the first time due to an external force. These external forces might be accompanying someone to gambling venues or as may be a part of the tour package etc. Individuals engage in behaviors that they found is right after the first engagement. This may include the enjoyment they experienced while engaging in the behavior previously. After the initial engagement, people evaluate the result of their effort cognitively and emotionally. If the outcome is desirable to them, they reinforce and sustain the behavior. Intrinsic motivation is found to influence the behavior and individual's attitude towards the behavior. Extrinsically motivated behavior may develop intrinsic features over repeated performance and might lead to sustainable behavior over time.

Since gambling helps fulfill three basic needs of autonomy, competence, and relatedness, people who fail to achieve the same from their real-life might resort to gambling for fulfilling these psychological needs. The need for well being and meaning obtained from gambling can be used to the application of self-determination theory in gambling. Gambling helps people achieve all three basic psychological needs of autonomy, competence, and relatedness. Gamblers feel a sense of belonging to fellow gamblers and obtain a sense of achievement through the winnings at the casinos.

Social influences from significant others affect the behavior. Support from others will help to continue the behavior while individuals tend to quit or reduce the behavior in question when significant others oppose the behavior. Individuals value the opinion of other people whom they value and trust, and they feel connected to. This signifies the role of relatedness on behavior as explained by self-determination theory. To achieve social identity, they engage in acceptable activities to the people who are important to them. Since people likely follow the group's norms and rules, gamblers will associate themselves with others who also gamble or consider gambling as acceptable behavior. This can be explained as the moderating role of subjective norms on gambling severity.

Apart from elaborating the motivations for behavior, self-determination theory further advances to explain the shift from casual behavior to compulsive behavior. Self-determination theory’s premise that the satisfaction of all the three basic psychological needs during the activity will result in greater intrinsic motivation and overall enjoyment applies to gambling behavior too. This will lead to gamblers spending more time on gambling and leading to increased severity in gambling.

This research analyses the motivational factors leading to gambling behavior and further examines the motivations leading to increased gambling severity. Self-determination theory, which discusses human motivations and provides a well-tested empirical framework for analyzing how deregulation occurs, is most apt for this study.

3.2 SOCIAL COGNITIVE THEORY- SCT (ALBERT BANDURA 1986)

Social cognitive theory model (Bandura 1986) hypothesizes relationships among personal, environment, and behavior variables. Social cognitive theory focuses on the role of self influence on the motivation and regulation of behavior. This theory emphasizes the role of the cognitive process in personality and learned behavior. Human beings are capable of controlling the quality of life by mediating the effects of external influences. Human behavior is controlled by forethought. Individuals anticipate each action's consequences, set goals based on their self-perception of their capabilities, or plan alternatives to achieve the desired outcomes. Individuals are identified by several characteristics like forethought, self-regulation, self-perception, etc., human beings are part of a society, and they can influence society. At the same time, they are also influenced by society. Individuals' ability of international and purposive action allows them to control things according to their choice. This helps them to adapt to situations and develop their own identity.

Since this theory is an approach to explaining human behavior through the cognitive process, it will be suitable for studying gambling behavior. Environmental stimuli affect behavior. Human behavior is affected by the societal systems and self-regulatory motives of the individual. This premise of the theory will help understand gambling behavior, which is also influenced by society's approach towards gambling and individuals' own cognition towards the behavior. Though human behavior is affected by socio-structural influences, it is further controlled and directed through psychological mechanisms to produce behavioral outcomes.

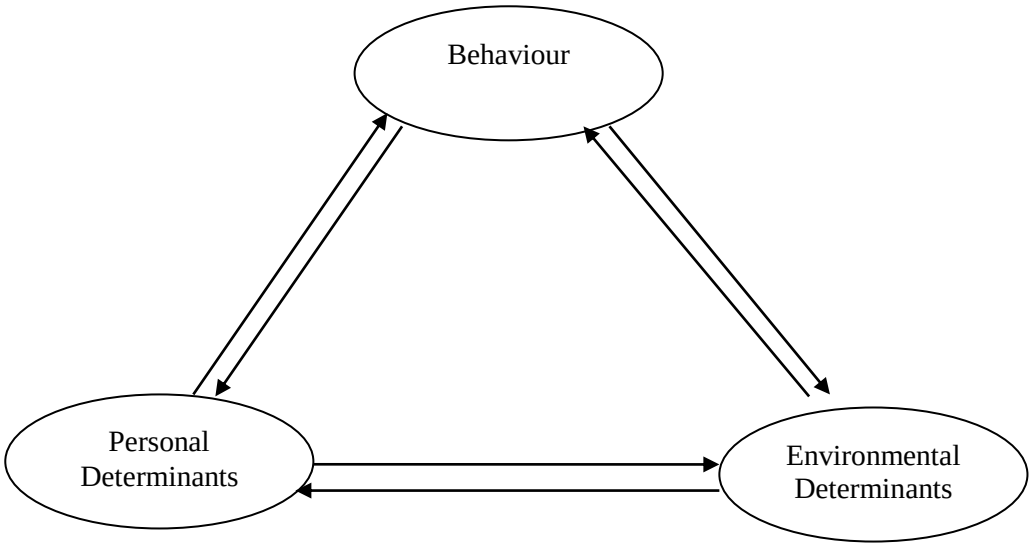
Cognitive factors predict human behavior rationally and guide effective interventions. Individuals are known to make their choices based on their cognition. Individuals are expected to assess their capabilities, expect the consequences of behavior, and plan their actions or behavior, considering the socio-structural opportunities and limitations. People who consider gambling risky and anti-social will not engage in this behavior. In contrast, others who consider gambling as a leisure activity will not see any harm in engaging in gambling. Human beings try to evaluate their desired expectations, consider their expectations, and perceive their capabilities and plan behavior accordingly. They set personal goals or motivate themselves to perform

pleasantly or impressively to bring about self-satisfaction.

The social cognitive theory also hypothesizes three two-way relationships among personal, environment, and behavior variables which is depicted in a pictorial representation in figure 3.1. According to social cognitive theory, environmental influences can be controlled by personal factors. The influence of the socio-structural factors on the behavior is controlled by the psychological mechanisms of self-system or individual cognition. Influence of significant others, social conditions like availability and accessibility of gambling venues and the gambler's economic condition will impact their gambling behavior through their sense of self-esteem, optimism, self-efficacy, etc.

Social cognitive theory model (Bandura 1986) hypothesizes othree two-way relationships among personal, environment, and behavior variables.

Figure: 3.1 Pictorial Representation Social Cognitive Theory



Given the above justifications, it is clear that the premises of social cognitive theory are suitable for this study's purpose.

3.3 PROPOSED MODEL

The proposed model based on the concepts of social cognitive theory depicting the determinants (personality traits- optimum stimulation level, self-esteem, optimism, impulsivity, and self-esteem) and behavior (gambling severity) is presented in Fig. 3.2.along with the mediator (gambling motivation) and the moderators (risk propensity and subjective norms).

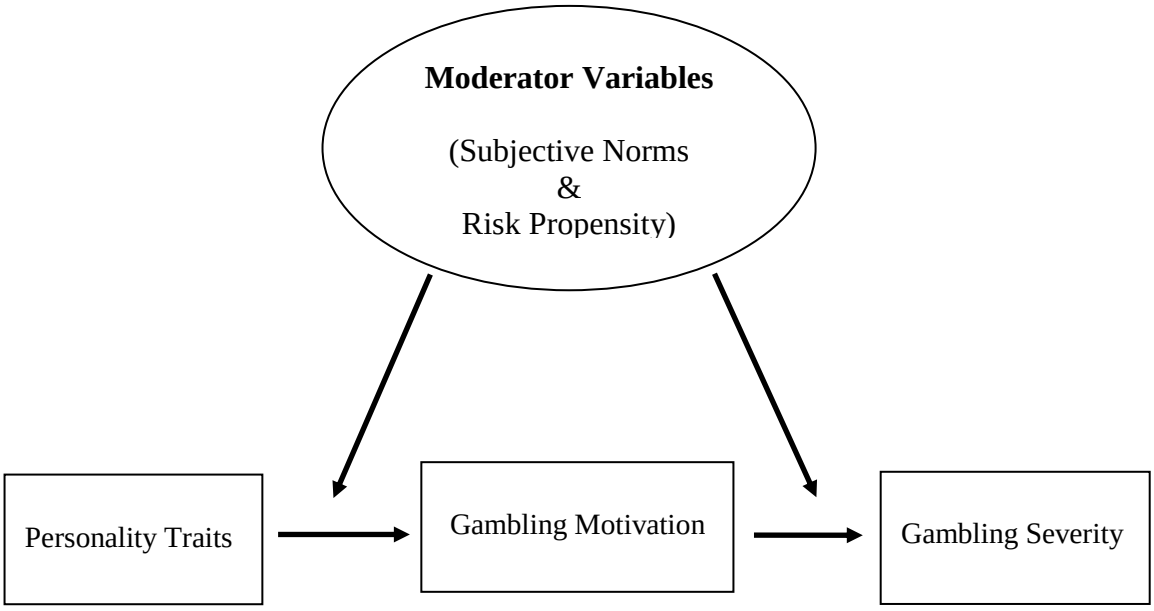


Fig 3.2 Proposed Models

3.4 OPERATIONAL DEFINITIONS OF CONSTRUCTS

Understanding certain concepts may vary among respondents, which mandates clarifying these terms' meaning by the steps or operations used to measure them. Operational meaning or description of the concepts used in a research problem in measurable terminology is called operational definition or working definitions. Operational definitions clarify concepts concerning the specific study and might mean different contexts (Kumar, 2012).

The tables below give various definitions of each construct from related literature. The operational definitions adapted by this study follow each table.

Table 3.4.1 Optimum Stimulation Level

Sr. No	Scholar	Definition
1	McReynolds,1971	"OSL is the amount of stimulation people prefer in life."
2	Mittelstaedt et al. 1976	"Optimum stimulation level is the way in which people's affective state responds to stimulation induced by the environment."
3	Zuckerman, 1979	"Optimum stimulation level (OSL) is the preferred level of stimulation in any organism."
4	Raju, 1980	"OSL is an individual's desired level of stimulation that characterizes an individual's general response to environmental stimulation."
5	Mowen, 2000	"OSL is a general personality trait that measures the individual's preferred level of stimulation perceived as the most satisfying and pleasant."

The operational definition of Optimum Stimulation Level

- **The optimum stimulation level** is a personality trait which measures an individual's preferred level of stimulation

Table 3.4.2 Self Esteem

Sr. No	Scholar	Definition
1	Rosenberg, 1965	"Self-esteem is a favorable or unfavorable attitude toward the self."
2	James, 1890	"Self-esteem is a self-appreciation determined by feelings toward the self."
3	Brown, 1993	"Self-esteem is the overall positive or negative evaluation of oneself."
4	Baldwin and Sinclair, 1996	"Self-esteem is a subjective value judgment about one's self."
5	Leary and Baumeister, 2000	"Self-esteem is the affective component of the self-concept which signifies how people feel about themselves."
6	Burger, 2006	"Self-esteem is how an individual evaluates her/his self-concept."
7	Campbell and Foster, 2006	"Self-esteem is an evolutionary adaptation which provides information concerning social standing within a group."
8	Neff, 2011	"Self-esteem is an evaluation of our worthiness as individuals, a judgment that we are good, valuable people."
9	Smith, Mackie, and Claypool, 2014	"Self-esteem is an individual's positive or negative evaluation of himself or herself."

The operational definition of Self Esteem

- **Self-esteem** is the self-perception that we are good and valuable people.

Table 3.4.3 Optimism

Sr. No	Scholar	Definition
1	Tiger,1979	"Optimism is a mood or attitude associated with an expectation about the social or material future – one which the evaluator regards as socially desirable, to his or her advantage, or for his or her pleasure."
2	Scheier and Carver, 1985	''Optimism is the positive generalized outcome expectancies.''
3	Avia and Vazquez, 1999	"Optimism is the tendency to believe that, in the future, positive results or success will occur."
4	Peterson, 2000	"Optimism is a cognitive, affective, and motivational construct of positive future outcomes."
5	Gillham and Reivich, 2004	"Optimism is the human tendency to expect positive future outcomes."

The operational definition of Optimism

- **Optimism** is the tendency to believe the outcome will be positive.

Table 3.4.4 Impulsivity

Sr. No	Scholar	Definition
1	Dickman, 1993	"Impulsivity is the adventurous, risky, quick decision-making behavior of an individual."
2	Bechara et al., 1994	"Impulsivity is the inability to weigh the consequences of immediate and future events and, consequently, delay gratification."
3	Ho et al., 1998	"Impulsivity is the selection of small immediate gains in preference to larger delayed gains, or the selection of large delayed penalties in presence to smaller immediate penalties."
4	Evenden, 1999	"Impulsivity is a wide range of actions that are poorly conceived, prematurely expressed, unduly risky, or inappropriate to the situations and that often result in undesirable outcomes."
5	Monterosso and Ainslie, 1999	"Impulsivity is the inability to delay gratification or the inverse of self-control."
6	American Psychiatric Association, 2000	"Impulsivity is the failure to resist an impulse, drive, or temptation to perform an act that is harmful to the person or others."
7	Moelleret al.,2001	"Impulsivity is the decreased sensitivity

		to negative consequences, rapid, unplanned reactions to stimuli before complete processing of information and lack of regard for long-term consequences."
8	Carver, 2005	"Impulsivity is a tendency to act spontaneously and without deliberation."

The operational definition of Impulsivity

- **Impulsivity is** behavior without adequate thought and the tendency to act with less forethought than most equal ability and knowledge individuals.

Table 3.4.5 Self Efficacy

Sr. No	Scholar	Definition
1	Bandura, 1977	"Self-efficacy is people's beliefs regarding their capability to succeed and attain a given level of performance."
2	Bandura, 1986	"Self-efficacy is the conviction that one can successfully execute the behavior required to produce the outcomes."
3	Gist and Mitchell, 1992	"Self-efficacy is an individual's self-assessment of his/her capacity for accomplishing a given task."
4	McAuley et al., 2001	"Self-efficacy is as an individual's beliefs in his or her abilities to execute necessary courses of action to satisfy situational demands."
5	Shea and Bidjerano,2010	"Self-efficacy is the subjective judgment of one's level of competence in executing certain behaviors or achieving certain outcomes in the future."

The operational definition of Self Efficacy

- **Self-efficacy** is an individual's perception of his or her capabilities to achieve a particular outcome.

Table 3.4.6 Gambling Motivation

Sr. No	Scholar	Definition
1	Kreitner, 1995	"Motivation is the psychological process that gives behavior purpose, and direction."
2	Maehr and Meyer, 1997	"Motivation is the initiation, direction, intensity, persistence, and quality of behavior."
3	DuBrin, 2008	"Motivation a force that drives drive that causes a person to act and the expenditure of effort to accomplish results."
4	Ryan and Deci, 2000	"Motivation is to be moved to do something."
5	Cole,2000	"Motivation is the processes, both initiative and rational, by which people seek to satisfy the basic drives, perceived needs, and personal goals, which trigger off human behavior."
6	Afzal et al., 2010	"Motivation is a state of mind that stimulates activities and human body actions. "

The operational definition of Motivation and Gambling Motivation

- **Motivation** is the force that stimulates human behavior.
- **Gambling motivation** is the force that leads people to be actively involved in gambling behavior.

Table 3.4.7 Gambling Severity

Sr. No	Scholar	Definition
1	Ferris and Wynne,2001	"Gambling severity is the increase in frequency, total expenditures, and percent of income spent on gambling and the total number of different games played."
2	May and colleagues, 2005	"Gambling severity is an increase in the number of wagers and the amount spent on each wager."
3	Miller and Currie, 2008	"Gambling severity is measured by how much people gamble and by the percent of income spent on gambling."
4	Currie et al., 2012	"Gambling severity is an increase in gambling participation."
5	Auer and Griffiths, 2013	"Gambling severity is the amount of money that players are prepared to risk when playing."
6	Currie, Hodgins and Casey, 2013	"Gambling severity is a measure of the frequency of gambling and monthly expenditure on gambling."

The operational definition of Gambling Severity

- **Gambling severity** is the measurement of time, frequency, and money spent on gambling.

Table 3.4.8 Risk-Propensity

Sr. No	Scholar	Definition
1	MacCrimmon and Wehrung, 1986a	"Risk propensity an individuals' willingness to take the risk."
2	Sitkin and Pablo, 1992	"Risk propensity is the tendency of a decision-maker either to take or to avoid risks."
3	Sitkin and Weingart, 1995	"Risk propensity is an individual's current tendency to take or avoid risks."
4	Nicholson et al., 2002	"Risk propensity is the frequency with which people do or do not take different kinds of risks, i.e., risk propensity is tested here as a summary concept for the risk-taking behavior of an individual across time and situations."
5	Rohrmann, 2005	"Risk-propensity is a positive attitude toward taking recognized risks."
6	Hamid, 2020	"Risk propensity is and individuals' current period tendency toward risk-taking."

The operational definition of Risk Propensity

- **Risk propensity** is an individual's consistent tendency to take risks across situations.

Table 3.4.9 Subjective Norms

Sr. No	Scholar	Definition
1	Ajzan and Driver,1991	"A subjective norm is the perceived pressure imposed by others, such as a neighbor, friends, peers, etc. who perform the behavior of interest."
2	Moore and Ohtsuka, 1997	"Subjective Norms is the influence of family and friends to perform a behavior."
3	Rivis and Sheeran, 2003	"A subjective norm is the beliefs about the extent to which significant others want you to perform a behavior."
4	Manning 2009	"A subjective norm is the perceived social pressure to engage in a behavior based on individuals' perceptions of what other people want them to do."
5	Eckhardt, 2009	"Subjective norms is the individual's perception of social pressure from others who are important to them (e.g., family, friends, colleagues, and others) to behave (or not) in a certain manner."
6	Shan and King, 2015	"Subjective norms is an individual's perceptions of the expectation from his or her social relations."
7	Ham, Jeger and Ivković, 2015	"Subjective norms is the belief that an important person or group of people will

		approve and support a particular behavior."
8	Hasbullah et al., 2016	"A subjective norm is the person's perception that most people who are important to him think that he should or should not perform the behavior in question."

The operational definition of Subjective Norm

- **Subjective norms** are the perceived pressure from significant other to perform or not to perform a particular behavior.

3.5 DEVELOPMENT OF HYPOTHESES

Research hypotheses are statements that predict the relationship between variables (Leech, Barrett, and Morgan, 2005). A hypothesis is a proposed explanation of the study crafted from the available resources on the concept. Hypotheses are used to add direction and bring clarity to the research problem. It is a suppositious statement which will be verified through the research work. The formulated hypothesis should be simple and clear to the audience and based on the existing knowledge.

3.5.1 Optimum Level of Stimulation (OSL)

According to the notion of Optimum Level of Stimulation (OSL), it measures an individual's preferred level of stimulation perceived as the most satisfying and pleasant (Mowen, 2004; Steenkamp et al., 2010).

Since individuals with high OSL are constantly under aroused and bored, they resort to environmental stimuli when their stimulation level falls below their optimum threshold (Olsen et al., 2015). The environmental stimuli they resort to are entertainment or leisure activity (Richard et al., 2010). Gambling is one of the leisure activities which provide arousal and excitement (Mowen et al., 2009). Since OSL positively correlates with risk-taking behavior (Raju, 1980), the risk associated with

gambling increases the arousal desired by high OSL individuals. OSL is considered an important antecedent of risk-taking, arousal, and variety-seeking behavior ads (Baumgartner and Steenkamp, 1996). In this study, the optimum stimulation level is proposed as an antecedent to gambling motivation. Thus we propose the hypothesis:

H 1: Optimum stimulation level is positively related to gambling motivation.

3.5.2 Self Esteem

Self-esteem is an important personality construct. Self-esteem is defined as ‘‘an individual’s positive or negative evaluation of himself or herself’’ (Smith, Mackie, and Claypool, 2014).

High self-esteem is associated with various positive psychological outcomes, including positive emotion and pro-social behavior (Leary and MacDonald, 2003). In contrast, low self-esteem shows social problems and inconsistent self-concepts. People with low self-esteem do not value themselves worthy, tend to surrender to peer pressure, and engage in addictive behavior. Low self-esteem is one of the characteristics of an addictive personality (Marlatt et al., 1988).

Researchers have established a negative relationship between self-esteem and various addictive behaviors like internet addiction (Błachnio et al., 2016) and game and gambling addiction (Laconi et al., 2015).

In contrast to most studies, Kim et al. (2008) found that a high level of self-esteem was positively related to online game addiction. Based on the literature review, we put forward the following hypothesis:

H 2: Self-esteem is negatively related to gambling motivation.

3.5.3 Optimism

Optimism can be defined as a stable personality trait related to positive expectations regarding future events (Carver et al., 2010). Optimists are people who expect that good thing will happen to them (Scheier and Carver, 1985).

There are researchers of the opinion that optimists are capable of coping and less susceptible to addiction. Researchers like Landers and Lounsbury (2006); Akhtar and Boniwell (2010), examining the association between optimism and addictive behaviors, found optimism to be negatively associated with addiction.

Studies on optimism showed that optimists tend to be happier than pessimists and involve in challenging activities (Peterson and Chang, 2003). This justifies prior research conclusions, which states that risky behavior may be more common among optimists than pessimists since risky behavior is challenging.

Given the various opinions about the relationship between optimism and addiction, we hypothesis a positive relationship between optimism and addiction.

H 3: Optimism is positively related to gambling motivation.

3.5.4 Impulsivity

Impulsivity is the tendency to make quick decisions or to act on a whim without foresight. A widely-accepted definition of impulsivity is a "tendency to act spontaneously and without deliberation" (Carver, 2005). It is characterized by the inability to stop initiated actions, novel sensations, risky activities, intolerance to delay, reward sensitivity, shorter reaction time, and lack of consideration of consequences of actions, preferring immediate gratification (Wiers et al., 2010).

Impulsive people are more prone to a various substance or behavioral addictions (Verdejo-Garcia et al., 2008; Lai et al., 2011). Since gambling requires a high level of sensory and mental stimulation, impulsive individuals will be more at risk of developing gambling severity (Nower et al., 2004). Researchers like Lee and Lee (2011) confirmed that impulsivity has no direct relationship to gambling.

This study proposes a significant positive relationship between impulsivity and gambling motivation.

H 4: Impulsivity is positively related to gambling motivation.

3.5.5 Self Efficacy

Self-efficacy can be defined as an "individual's beliefs in his or her abilities to execute necessary courses of action to satisfy situational demands" (McAuley et al., 2001). Self-efficacy is often hypothesized to be a strong influence on behavior (Moritz et al.,2000) because higher levels of self-efficacy are related to a propensity to undertake more challenging tasks, to expend more effort in pursuit of goals, and to demonstrate greater resilience in the face of aversive stimuli (Bandura, 1986).

Self-efficacy has been examined as a robust predictor of behavior in different addictions. Low self-efficacy has been associated with various addictions like alcohol addiction (Skutle, 1999), internet addiction (Lin, Ko, and Wu, 2008; Iskender and Akin, 2010), smartphone addiction (Chiu et al., 2014; Samaha and Hawi, 2016; Lee et al., 2018), gambling addiction (Ricketts and Macaskill, 2004).

Individuals with high self-efficacy attribute failure to insufficient efforts and increase their efforts in case of negative outcomes (Weiner and Craighead, 2010). This holds gambling too, where people with high self-efficacy continue even after losing.

H 5: Self-efficacy is negatively related to gambling motivation.

3.5.6 Gambling Motivation

Motivation is the fundamental drive for people to engage in a specific behavior. Motivational models of addictions can be useful in understanding addictive behaviors like substance addiction. Gambling literature suggests that one's gambling motivation influences gambling-related behaviors. According to Lee et al. (2007), the psychological motives leading to gambling addiction are not satisfactorily researched.

Individuals tend to pursue certain behavior only if they are motivated to perform the same. If they lack motivation, people even avoid the most gratifying behavior also. The same is applicable in gambling behavior too. Greater motivation to gamble predicts increased frequency (Pantalon et al., 2008; Stewart and Zack, 2008). Oei and Raylu (2010) were probably the first among the few researchers to reflect on gambling motivation's mediating effect.

H 6: Gambling motivation is positively related to gambling severity.

3.5.7 Risk Propensity

Risk propensity comprises various dimensions like risk-taking, risk perception, and price consciousness (Teas and Agarwal, 2000).

Zuckerman et al. (1964) pioneered the research in establishing the relationship between risk propensity and risk-taking behaviors like gambling (Zuckerman and Kuhlman, 2000; Martins et al., 2004; Vong,2007; Van Brunschot, 2009; Miedl et al., 2014), alcohol obsessions (Clay et al., 2018; Heinz et al., 2016) and ascertained a positive relationship between the two.

Although researchers agree that risk propensity is associated with addictive behaviors (Aklin et al., 2005; Lejuez et al., 2007; Williams et al., 2010), whether risk propensity moderates the relationship between the addiction and severity remains unknown (Del Casale et al., 2019).

Vong (2007) ascertained the moderating role of risk propensity on gambling motivation. Del Casale et al., 2019, study the moderating role of risk propensity on the relation between alcohol addiction and severity and confirmed that the relationship is moderated by risk propensity.

This study supports the fact that higher levels of risks accentuate the relationship between gambling motivation and gambling intensity.

H 7: Risk propensity moderates the relationship between gambling motivation and gambling severity.

3.5.8 Subjective Norms

According to the Theory of Planned Behavior, attitude toward the behavior, subjective norm, and perception of behavioral control lead to behavioral intention. Subjective norm is considered the second predictor of behavior in the Theory of Reasoned Action (Bagozzi, Moore, and Leone, 2004). Subjective norm refers to the perceived social pressure to engage in behavior based on individuals' perceptions of what other people want them to do (Manning, 2009). Some social psychologists, like

Bagozzi et al. (2000), conclude subjective norms are more important than personal attitudes in deciding behavior among Chinese people.

Researchers have examined the influence of subjective norms on various behaviors like online purchase (Hasbullah et al., 2016), environmentally responsible behavior (Biel and Thøgersen, 2007), substance use (Lac et al., 2009; Kim and Neff, 2010; Patel and Fromme, 2010; Walker et al., 2011; Halgunseth et al., 2013) purchase of sustainable products (Vermeir and Verbeke, 2006) all have established a positive relationship between subjective norms and the behavior in question. The results of these studies show a positive relationship between subjective norms and behaviors. Yet few studies on the purchase of sustainable products and subjective norms found no relationship between the two (Amran and Nee, 2012; Antony et al., 2012).

There are contradictory findings of the influence of subjective norms on gambling. Researchers Bagozzi et al. (2004) found that the effect of subjective norms on gambling is negligible. They attribute this finding that individual behavior is more dependent on personal attitude than important others' influence.

Studies have also examined the effect of subjective norms on gambling severity and found favorable norms correlated with problematic gambling (Moore and Ohtsuka, 1999; Neighbors et al., 2015; Canale et al., 2016). Some other researchers established an opposite finding that a subjective norm was negatively correlated to gambling (Neighbors et al., 2007; Martin et al., 2010). Since this finding is in the opposite direction to the theory of planned behavior, they advised additional research to explore the value of subjective norms in predicting gambling behavior.

This study examines the moderating effect of subjective norms on the relations between Gambling Motivation and Gambling Severity.

H 8: Subjective Norms moderates the relationship between gambling motivation and gambling severity.

Chapter 4

RESEARCH METHODOLOGY

CHAPTER 4

RESEARCH METHODOLOGY

Research is a systematic investigation (Burns, 1997). It is a logical and syste

matic inquiry whereby information is collected, analyzed, and interpreted better to understand a phenomenon (Mertens, 2005). Research involves systematic and rigorous exploration of unknown concepts intending to find association and causation effects to predict a phenomenon's outcomes. It involves verifying already known facts and identifying gaps and limitations of the earlier knowledge pool (Kumar, 2012). Research is a way of thinking, examining various aspects critically, and developing new theories that contribute to the advancement of the particular field of study. It is an objective inquiry into various phenomena to obtain a deeper understanding and provides a better explanation than previously provided.

Research methods and research methodology are two terms that are used interchangeably. But they both are not the same. Research methods are the methods by which you research a topic, while research methodology refers to the methods by which you proceed in your research. Experiments, tests, and surveys are examples of research methods, and the various techniques to be used in conducting these experiments, tests, and surveys are examples of research methodology. Methods refer to the researchers' systematic steps in performing research operations or studying the research problem logically (Kothari, 2004). The research methodology is the set of methods by which the particular study is undertaken or a collection of principles and theories that support a particular approach to research (Somekh and Lewin, 2005). Research methodology constitutes the path towards finding answers to the research questions. The methodology is the overall approach to research linked to the theoretical framework, and research methods are the systematic modes, procedures, and tools used for collecting and analyzing the data. The procedures used to explain and predict the phenomena are called research methodology.

This chapter provides the details of the research methodology adopted in this study and includes the research design, approach, population and research setting, data collection tools used, sample size, data collection process, data analysis techniques, and data analysis plan.

4.1 RESEARCH DESIGN AND APPROACH

4.1.1 Research Design

A research design is an overall strategy selected to integrate the different components of the study coherently and logically to examine the research problem adequately. It is the conceptual structure within which the research is conducted.

A research design constitutes the blueprint for the collection, measurement, and analysis of data. It includes a clear statement of the research problem, operationalization of the variables planned to be measured, selection of the sample of interest, procedures to be used for sample collection, and the methods used to process and analyze the data. It is important to select a suitable research design for planning the further stages of research methods (Kothari, 2004).

This study uses a cross-sectional design since it is well suited for studies to identify the prevalence of a situation or problem and attitudes by examining the population's cross-section.

4.1.2 Research Approach

The research approach is an effective strategy to increase the validity of social research Cresswell (2007). A research approach helps in determining the level of the phenomenon in question.

This research used quantitative research because of the magnitude of the variation in the phenomenon of this study. An inferential approach is useful in studying a sample population to determine its characteristics, inferring that it has the same characteristics. This co-relational study used a structured quantitative research approach to explore the relationship between the determinants of gambling, gambling motivation, gambling severity, and moderating variables that will affect the relationship, identified through an in-depth review of the literature and the help of a theoretical base.

4.2 POPULATION AND RESEARCH SETTINGS

All the items under consideration in the field of inquiry are called the 'population.' It is impossible to examine every item in the population. It is also possible to gather required information by examining a representative of the target population. The study population or sample is the respondents from whom the requisite information for finding answers to the research questions is obtained. Research setting means the physical location and conditions in which data collection occurs (Polit and Beck, 2009).

This study uses primary data collected through a convenience sampling method. This study's target population is customers visiting casinos for gambling and who have been to the casinos not less than six times. Data has been gathered from 254 respondents using structured instruments. Although gambling has increased considerably over the years, there is considerable concern regarding the antecedents leading to gambling. This study considered onshore casino customers to obtain a comprehensive understanding of the antecedents of gambling and gambling severity, the moderating role of subjective norms, and risk propensity on gambling severity along with other factors such as respondents' age, gender, marital status, qualification, and employment status.

4. 3 DATA COLLECTION TOOLS

4.3.1 Identification of Tools

Through an extensive review of the literature, the following tools were identified for the purpose of data collection in this study. These scales have been tested for reliability and validity in several studies which have established their psychometric properties.

- The most widely used measure of self-esteem, the Rosenberg Self-Esteem Scale (Rosenberg, 1965), is used to measure self-esteem in this study.
- The optimum stimulation level is measured using a short form of Garlington's Change Seeker Index (Steenkamp and Baumgartner, 1995).
- This study used the Barratt Impulsivity Scale (BIS), a well-known and frequently used scale for assessing personality trait impulsiveness (BIS; Barratt, 1959).

- The general self-efficacy scale of Jerusalem and Schwarzer (1995) is used to measure efficacy.
- The Life Orientation Test-Revised (LOT-R) of Scheier, Carver, and Bridges (1994) is used to measure optimism.
- The mediating variable, gambling motivation, has been measured using the motivation section of the Gambling passion scale of Back, Lee, and Stinchfield (2011). Approval has been obtained from the authors for using only one section of the scale.
- Gambling severity, which is the dependent variable, has been measured by The Canadian Problem Gambling Index (CPGI: Ferris and Wynne, 2001).
- Moderating variable risk propensity is measured using the General Risk Propensity Scale by Hung and Tangpong (2010).
- Subjective norm, the other moderating variable used in the study, is measured by subjective norms scale items from the Theory of Planned Behavior Questionnaire (Ajzen, 2002).

4.4 SAMPLE SIZE

The final factor to be considered before data collection is the sample size (*n*). SEM estimation and testing are based on asymptotic theory (Baumgartner and Homburg, 1996), and adequate sample size is required for the parameter estimates and test statistics to be valid. Table 4.1 lists the sample size recommendation by various researchers.

Table 4.1 Recommendations on Sample Size

Author	**Recommendation**
Guilford (1954)	N should be at least 200 cases
Lawley and Maxwell (1971)	To support chi-square testing, they suggested 51 more cases than the number of variables.

Cattell (1978)	Subject to Variable ratio of 3:1 to 6:1 is acceptable if the lower limit of variable-to-factor ratio is 3 to 6. But Minimum required N is 250
Gorsuch (1983)	The sample size should be at least 100. Even if the number of variables is less than 20, the sample size should not be less than 100
Bentler and Chou(1987)	Sample size to the number of parameters to be 5:1
Hatcher and Stepanski (1994)	The sample size should be larger of 5 times the number of variables or 100
Hair et al. (1995)	The sample size should be 20 times the number of variables
Bryant and Yarnold (1995)	The subject-to-variable ratio should not be lower than 5
Hutcheson and Sofroniou (1999)	Recommended 150 to 300 cases. When there are few highly correlated variables, it should be around 150.
Norušis (2005)	There should be at least 300 cases
Sivo et al. (2006)	He proposed a 'critical sample size' of 200. Any number above 200 is understood to provide sufficient statistical power for data analysis.
David Garson (2008)	There should be at least 10 cases for each item in the instrument being used

This study's sample size was 254, which are more than six observations per variable and adequate for the analysis as per the above table.

4.5 DATA COLLECTION PROCESS

It was planned to collect the data through a self-report from gamblers. The researcher administered the tools (Appendix I) after a clear and complete explanation to every participant regarding filling the data sheets that were personally administered to 400 respondents. Communication barriers restricted the researcher from administering the questionnaire to more respondents. The researcher allowed the participants one week to complete their tool responses, to avoid researcher presence bias or compulsion for favourable responses and consider the mental state. They were requested to provide complete data. In case of incomplete datasheets, the participants were requested to complete the same within another week, after which few respondents completed and the same was collected. In all, 297 questionnaires were collected back. Due to the mental conditions and rush to gamble attitude of the respondents, the researcher had to visit as many as four times to receive the sheets back. The data collection period was from April 2018 to April 2019. On a further check, 43 self-reports were found to be incomplete. Two hundred fifty-four completed questionnaires were used for analysis.

4.5.1 Data Cleaning

Data were entered into SPSS version 25 for analysis. Following the entry of 297 self-reports, the data were checked for missing, incomplete responses and outliers. After excluding the data sheets with missing responses on items and the outliers, the usable self-reported data sheets were 254. The data were further checked using descriptive statistics.

4.6 SAMPLE CHARACTERISTICS

This study's demographic variables are age, gender, marital status, qualification, and employment status. A sample characteristic of responses found to be complete and were used for analysis is presented in table 4.2.

Table 4.2 Sample Characteristics

No.	Demographic Variable	Classification	Frequency	Percentage
1	Age	Class1 (20-30 years)	48	19
		Class1 (30-40 years)	76	30
		Class1 (40-50 years)	97	38
		Class1 (50-60 years)	33	13
2	Gender	Male	203	80
		Female	51	20
3	Marital Status	Married	156	61
		Single	98	39
4	Qualification	Below HSC	7	3
		Higher Secondary	68	27
		Graduation	132	52
		Post Graduation	47	18
5	Employment Status	Service	42	16.5
		Business	212	83.5

4. 7 RELIABILITY OF TOOLS

Test of reliability is an important test of measurement for assessing the quality of instruments used in a study. It estimates the scale's consistency amid multiple variable measurements (Hair, Black, Babin, and Anderson, 2010). A reliability test for internal

consistency for all the tools was performed, and the Cronbach's alpha values were above 0.7.as shown in table 5.1.1 in the following chapter.

4.8 DATA ANALYSIS TECHNIQUES.

4.8.1 Structural Equation Modeling (SEM)

IBM SPSS AMOS Version 25 is used for data analysis using SEM. Structural equation modeling or SEM is the most commonly used statistical modeling technique in behavioral sciences. It is a combination of factor analysis and regression or path analysis. This enables a researcher to simultaneously examine a series of interrelated dependence relationships among the measured variables and latent constructs as well as between several other latent constructs" (Hair, Black, Babin, and Anderson, 2010). Path analysis is used for testing the hypotheses, which estimates the relationships between constructs in the model. Path analysis estimates the strength of each relationship in a path diagram.

4.8.2 Mediation Effects

One of the hypotheses involves testing the mediation effect of gambling motivation on the relationship between personality traits and gambling severity. The mediating effect is the effect of another variable, influencing the relationship between two different constructs. To understand the mediation effect of a variable, it is required to test the model for direct and indirect effects. The direct effect is the relationship between the independent and the dependent variable. The indirect effect is the relationship between the independent variable and dependant variable through the intervening variable.

4.8. 3 Moderation Effects using Multi-Group Moderation Analysis

Moderating effects is the effect of another variable altering the relationship between two constructs. If the relationship between the two constructs is affected depending on the third variable, the relation is said to have a moderating effect by including the third variable. Since it involves structural testing model estimates, it is considered as an extension of multi-group analysis.

Separately calculating path estimates for each group gives the estimation of the first group model. The second group model's estimation is done by constraining the path estimate of interest to be equal between groups. Differences between models are compared using a chi-square difference test, indicating a significant decrease in the model fit (increase in the chi-square) after the estimates are constrained to be equal. A difference between models that is statistically significant indicates a difference in the path estimates and indicates that moderation does exist. While testing for moderation, the researcher looks out for a significant difference in the two models that will support the hypothesis that there is a difference in the path estimates.

Chapter 5

ANALYSES AND RESULTS

CHAPTER 5

ANALYSES AND RESULTS

The analysis and findings of the study are presented in this chapter in the order of objectives. It deliberates on the consolidated data collected through questionnaires for interpretation. The analysis includes discussing the statistical outputs obtained from the Statistical Package for Social Sciences (SPSS 25) on various tests conducted for association and differences. Measurement model has been established for testing the reliability and validity of constructs, and a structural equation modeling using Amos has been developed and tested to establish the relationships stated in the hypotheses. The study additionally tested the mediation by gambling motivation and moderation by subjective norms and risk propensity. The results have been tabulated and narrated along with the models.

5.1 RELIABILITY

Reliability tests the consistency of scales over time and internal consistency. Internal consistency is measured using Cronbach alpha. The acceptable value for Cronbach alpha is ≥.70, and .60 is considered fair. The item-total correlations should exceed a minimum acceptable value of 0.30 (Tylka, Bergeron, and Schwartz, 2005; Hair, Black, Babin, and Anderson, 2010).

A reliability test for internal consistency for all the tools was performed, and the Cronbach alpha values were above 0.7.as shown in table 5.1.1.

Table 5.1.1 Reliability of Tools

No.	Scale	No. of items	Alpha Value
1	Garlington's Change Seeker Index (Optimum Stimulation Level)	5	.873
2	Rosenberg Self-Esteem Scale (Self Esteem)	4	.868
3	The Life Orientation Test-Revised (LOT-R) (Optimism)	3	.762
4	Barratt Impulsivity Scale (BIS) (Impulsivity)	3	.826
5	General Self-Efficacy Scale (Self Efficacy)	3	.752
6	Gambling Motivation and Passion scale (Gambling Motivation)	5	.855
7	General Risk Propensity Scale (Risk Propensity)	5	.733
8	Subjective Norms Scale Items (Subjective Norms)	2	.739
9	The Canadian Problem Gambling Index (CPGI) (Gambling Severity)	9	.920

The item-total correlations of the scales used in this study are provided in tables 5.1.2-5.1.9.

Table 5.1.2 Item – Total Statistics: Garlington's Change Seeker Index

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OSL1	14.22	10.220	.671	.473	.853
OSL2	14.29	9.771	.750	.569	.834
OSL3	14.42	9.881	.655	.444	.858
OSL4	14.17	9.751	.736	.554	.837
OSL5	14.35	10.127	.692	.498	.848

Table 5.1.3 Item – Total Statistics: Rosenberg Self-Esteem Scale

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SES1	9.48	5.563	.715	.536	.832
SES2	9.34	5.768	.672	.473	.849
SES3	9.56	5.330	.737	.550	.823
SES4	9.13	5.603	.752	.569	.818

Table 5.1.4 Item – Total Statistics: Life Orientation Test-Revised (LOT-R)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
OPT1	7.22	2.945	.637	.424	.627
OPT2	7.45	2.929	.523	.275	.757
OPT3	7.15	2.847	.615	.407	.648

Table 5.1.5 Item – Total Statistics: Barratt Impulsivity Scale (BIS)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IMP1	4.34	1.918	.699	.536	.739
IMP2	4.27	1.809	.743	.576	.692
IMP3	4.23	1.926	.603	.369	.837

Table 5.1.6 Item – Total Statistics: The General Self-Efficacy Scale

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SEF1	6.66	.977	.578	.339	.673
SEF2	6.61	.951	.613	.376	.633
SEF3	6.58	1.035	.553	.308	.701

Table 5.1.7 Item – Total Statistics: Gambling Motivation and Passion Scale

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
GM1	13.49	36.188	.604	.399	.840
GM2	13.47	36.044	.709	.522	.813
GM3	12.64	35.046	.644	.424	.830
GM4	13.65	35.723	.688	.509	.817
GM5	13.16	36.065	.695	.557	.816

Table 5.1.8 Item – Total Statistics: General Risk Propensity Scale

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
RK1	17.34	16.519	.598	.549	.639
RK2	18.69	16.127	.437	.332	.706
RK3	19.02	17.992	.395	.316	.714
RK4	17.46	17.665	.466	.325	.688
RK5	17.26	16.381	.564	.522	.650

Table 5.1.9 Item – Total Statistics: The Canadian Problem Gambling Index

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
GI1	9.61	15.655	.822	.757	.900
GI2	9.60	16.533	.710	.670	.908
GI3	9.52	15.744	.711	.568	.909
GI4	9.67	16.935	.689	.547	.909
GI5	9.66	17.300	.660	.556	.911
GI6	9.72	18.046	.674	.523	.913
GI7	9.66	16.699	.711	.593	.908
GI8	9.65	16.451	.754	.608	.905
GI9	9.59	16.092	.708	.560	.909

The item-total correlations in the above tables present acceptable levels of item-total correlations. Other statistics like variance squared multiple correlations and alpha if item deleted indicate the scales' best composition considering multiple parameters.

5. 2. RESULTS OF FACTOR ANALYSIS

Factor analysis is used to group highly intercorrelated variables into separate factors (Hair, Black, Babin, and Anderson, 2010). When researchers lack an understanding of how the different variables relate, exploratory factor analysis is to be used, while confirmatory factor analysis is to be used to test a hypothesised structure (Matsunaga, 2010). Once a scale has been identified, EFA is exercised to inspect the item set's underlying dimensionality. The extracted factors explain the maximum variance in the scale. This helps grouping items into meaningful subsets that measure different factors (Worthington and Whittaker, 2006).

Items communalities explain the variance shared by each measured item with other items of the construct (Hair, Black, Babin, and Anderson, 2010). The acceptable value of item communalities is .4 to .7 in social sciences research (Costello and Osborne, 2005). The item communalities of the scales used in this study are provided in tables 5.1.2-5.1.9.

Each factor explains a percent of the total variance. In social sciences, a factor solution accounting for the total variance extracted up to 50 percent is acceptable (Floyd and Widaman, 1995). Factors that do not explain much variance might not be worth, including in the final model. Iteration is used to develop the optimal number of factors during analysis for factors that explain lesser variance. Total variances explained of the scales used in this study are provided in tables 5.2.10 – 5.2.18.

The researcher assessed the suitability of data for factor analysis through the Kaiser-Meyer-Oklin measure of sample adequacy (MSA) and the Bartlett Test of Sphericity (BTS). Tables 5.2.19 – 5.2.27 provide the results of Kaiser Mayor Olkin and Bartlett’s tests.

The following tables 5.2.1-5.2.9 indicate the item communalities of the scales used in this study.

Table 5.2.1 Item Communalities: Garlington's Change Seeker Index

Item	Initial	Extraction
OSL 1 I like doing something new or different than always doing the same things	**1.000**	**.629**
OSL 2 I like having change and making novel experiences in everyday life	**1.000**	**.725**
OSL 3 I prefer to lead a life that facilitates change, variety, and travel even if I have to meet unexpected situations	**1.000**	**.607**
OSL 4 I always seek new ideas and experiences	**1.000**	**.707**
OSL 5 It is appealing to me to do something different always	**1.000**	**.655**

Table 5.2.2 Item Communalities: Rosenberg Self-Esteem Scale

Item	Initial	Extraction
SES 1 I never feel I am not good	**1.000**	**.713**
SES 2 I feel I have a lot to be proud of	**1.000**	**.662**
SES 3 I always feel I am good	**1.000**	**.737**
SES 4 All in all, I am inclined to think that I am a winner	**1.000**	**.754**

Table 5.2.3 Item Communalities: Life Orientation Test-Revised (LOT-R)

Item	Initial	Extraction
OPT 1 Nothing can go wrong	**1.000**	**.731**
OPT 2 I am always optimistic about my future	**1.000**	**.593**
OPT 3 It is important for me to keep busy	**1.000**	**.712**

Table 5.2.4 Item Communalities: Barratt Impulsivity Scale (BIS)

Item	Initial	Extraction
IMP 1 I act on impulse	**1.000**	**.767**
IMP 2 I act on the spur of the moment	**1.000**	**.808**
IMP 3 I buy things on impulse	**1.000**	**.653**

Table 5.2.5 Item Communalities: The general self-efficacy scale

Item	Initial	Extraction
SEF 1 Thanks to my resourcefulness, I know how to handle unforeseen situations	**1.000**	**.666**
SEF 2 If I am in trouble, I can usually think of a solution	**1.000**	**.704**
SEF 3 I can usually handle whatever comes my way	**1.000**	**.637**

Table 5.2.6 Item Communalities: Gambling motivation and passion scale

Item	Initial	Extraction
GM 1 To win back previous losses	**1.000**	**.545**
GM 2 To practice casino games	**1.000**	**.687**
GM 3 To experience my achievement	**1.000**	**.597**
GM 4 To meet new people	**1.000**	**.664**
GM 5 To learn casino games	**1.000**	**.678**

Table 5.2.7 Item Communalities: General Risk Propensity Scale

Item	Initial	Extraction
RK 1 I like to take chances, although I may fail	**1.000**	**.683**
RK 2 I would love to be the first to try new products with a high promise of rewards.	**1.000**	**.342**
RK 3 When consequences are not sure, I take the risky option thinking I will get greater rewards	**1.000**	**.281**
RK 4 I like to try new things, knowing well that some of them will disappoint me	**1.000**	**.497**
RK 5 To earn greater rewards, I am willing to take higher risks	**1.000**	**.651**

Table 5.2.8 Item Communalities: Subjective Norms scale

Item	Initial	Extraction
SN 1 Most people who are important to me think I should gamble in a casino	**1.000**	**.793**
SN 2 Most people in my life whose opinions I value would approve of me gambling in a casino	**1.000**	**.793**

Table 5.2.9 Item Communalities: The Canadian Problem Gambling Index

Item	Initial	Extraction
GI 1 Bet more than you could afford to lose	**1.000**	**.748**
GI 2 Needed to gamble with larger amounts of money to get a feeling of excitement	**1.000**	**.606**
GI 3 Gone back another day to try and win back the money you lost	**1.000**	**.603**
GI 4 Borrowed money or sold anything to get money to gamble	**1.000**	**.572**
GI 5 Felt that you might have a problem with gambling	**1.000**	**.540**
GI 6 Felt that gambling had caused you health problems, including stress and anxiety	**1.000**	**.555**
GI 7 People criticized your betting or told you that you have a gambling problem	**1.000**	**.602**
GI 8 Felt that your gambling had caused financial problems for you or your household	**1.000**	**.662**
GI 9 Felt guilty about the way you gamble or what happens when you gamble	**1.000**	**.610**

The communality values indicated in the above tables show sufficient variance accounted by items. Those items that do not fit the scale have been removed at the analysis stage using a sufficient number of iterations.

Tables 5.2.10 - 5.2.18 indicate the total variance explained.

Table 5.2.10 Total Variance Explained: Garlington's Change Seeker Index

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.323	66.463	66.463	3.323	66.463	66.463
2	.521	10.420	76.884			
3	.486	9.726	86.610			
4	.335	6.707	93.317			
5	.334	6.683	100.000			

Extraction Method: Principal Component Analysis.

Table 5.2.11 Total Variance Explained: Rosenberg Self-Esteem Scale

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.866	71.651	71.651	2.866	71.651	71.651
2	.482	12.051	83.702			
3	.352	8.790	92.492			
4	.300	7.508	100.000			

Extraction Method: Principal Component Analysis.

Table 5.2.12 Total Variance Explained: Life Orientation Test-Revised (LOT-R)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.036	67.866	67.866	2.036	67.866	67.866
2	.575	19.178	87.044			
3	.389	12.956	100.000			

Extraction Method: Principal Component Analysis.

Table 5.2.13 Total Variance Explained: Barratt Impulsivity Scale (BIS)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.228	74.272	74.272	2.228	74.272	74.272
2	.497	16.554	90.826			
3	.275	9.174	100.000			

Extraction Method: Principal Component Analysis.

Table 5.2.14 Total Variance Explained: The general self-efficacy scale

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.007	66.911	66.911	2.007	66.911	66.911
2	.541	18.030	84.941			
3	.452	15.059	100.000			

Extraction Method: Principal Component Analysis.

Table 5.2.15 Total Variance Explained: Gambling motivation and passion scale

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.172	63.444	63.444	3.172	63.444	63.444
2	.647	12.936	76.380			
3	.469	9.377	85.757			
4	.418	8.364	94.120			
5	.294	5.880	100.000			

Extraction Method: Principal Component Analysis.

Table 5.2.16 Total Variance Explained: General Risk Propensity Scale

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.454	49.075	49.075	2.454	49.075	49.075
2	1.224	24.476	73.551			
3	.630	12.591	86.143			
4	.403	8.067	94.209			
5	.290	5.791	100.000			

Extraction Method: Principal Component Analysis.

Table 5.2.17 Total Variance Explained: Subjective Norms scale

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.586	79.293	79.293	1.586	79.293	79.293
2	.414	20.707	100.000			

Extraction Method: Principal Component Analysis.

Table 5.2.18 Total Variance Explained: The Canadian Problem Gambling Index

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.500	61.114	61.114	5.500	61.114	61.114
2	.796	8.841	69.955			
3	.662	7.358	77.312			
4	.506	5.618	82.931			
5	.443	4.924	87.855			
6	.341	3.789	91.644			
7	.328	3.649	95.293			
8	.268	2.973	98.266			
9	.156	1.734	100.000			

Extraction Method: Principal Component Analysis.

The above tables indicate that all the scales are uni-dimensional, and a single factor explains a sufficient amount of total variance in the data. A cut of Eigenvalue of 1was used to determine the number of factors.

The following tables show the KMO and Bartlett's test results.

Table 5.2.19 Sampling Adequacy: Garlington's Change Seeker Index

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.864
Bartlett's Test of Sphericity	Approx. Chi-Square	591.358
	Df	10
	Sig.	.000

Table 5.2.20 Sampling Adequacy: Rosenberg Self-Esteem Scale

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.813
Bartlett's Test of Sphericity	Approx. Chi-Square	482.855
	Df	6
	Sig.	.000

Table 5.2.21 Sampling Adequacy: Life Orientation Test-Revised (LOT-R

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.677
Bartlett's Test of Sphericity	Approx. Chi-Square	197.618
	Df	3
	Sig.	.000

Table 5.2.22 Sampling Adequacy: Barratt Impulsivity Scale (BIS)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.691
Bartlett's Test of Sphericity	Approx. Chi-Square	298.626
	Df	3
	Sig.	.000

Table 5.2.23 Sampling Adequacy: The general self-efficacy scale

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.688
Bartlett's Test of Sphericity	Approx. Chi-Square	178.904
	Df	3
	Sig.	.000

Table 5.2.24 Sampling Adequacy: Gambling motivation and passion scale

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.830
Bartlett's Test of Sphericity	Approx. Chi-Square	534.793
	Df	10
	Sig.	.000

Table 5.2.25 Sampling Adequacy: General Risk Propensity Scale

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.659
Bartlett's Test of Sphericity	Approx. Chi-Square	378.405
	Df	10
	Sig.	.000

Table 5.2.26 Sampling Adequacy: Subjective Norms scale

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	105.738
	Df	1
	Sig.	.000

Table 5.2.27 Sampling Adequacy: The Canadian Problem Gambling Index

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.891
Bartlett's Test of Sphericity	Approx. Chi-Square	1444.415
	Df	36
	Sig.	.000

Kaiser Mayor Olkin's test of sampling adequacy and Bartlett's test of sphericity indicated in the above tables establish the data's amenability for exploratory factor analysis.

5.3 FACTOR LOADING

Factor loading derived from factor analysis explains the correlations between observed variables using a smaller number of factors. Desirable factor loadings of ± .5 and greater are considered significant (Costello and Osborne, 2005). When the sample size per variable is between 5 and 10 respondents, factor loadings exceeding .30 are considered meaningful (Floyd and Widaman, 1995). The sample size was 254, which are more than 5 per variable, and the factor loadings obtained in the data set are between .899 and .53 (Table. 5.3.1). 3-5 items explain four factors. A two-item factor can also be retained and considered acceptable if the items are strongly correlated (r > .70; or >.60) and reasonably uncorrelated with other variables (Worthington and Whittaker, 2006; Pedroso et al., 2016). The factor loadings of the scales used in this study are provided in table 5.3.1.

Table 5.3.1 Factor Loadings

I	**SELF EFFICACY**	**Factor Loadings**
SEF2	If I am in trouble, I can usually think of a solution	.839
SEF1	Thanks to my resourcefulness, I know how to handle unforeseen situations	.816
SEF3	I can usually handle whatever comes my way	.798
II	**RISK**	**Factor Loadings**
RK1	I like to take chances, although I may fail	.826
RK5	To earn greater rewards, I am willing to take higher risks	.807

RK4	I like to try new things, knowing well that some of them will disappoint me	.705
RK2	I would love to be the first to try new products that have a high promise of rewards.	.585
RK3	When consequences are not sure, I take the risky option thinking I will get greater rewards	.530
III	**SELF ESTEEM**	**Factor Loadings**
SES4	All in all, I am inclined to think that I am a winner	.868
SES3	I always feel I am good	.858
SES1	I never feel I am not good	.844
SES2	I feel I have a lot to be proud of	.814
IV	**GAMBLING MOTIVATION**	**Factor Loadings**
GM2	To practice casino games	.829
GM5	To learn casino games	.824
GM4	To meet new people	.815
GM3	To experience my achievement	.773
GM1	To win back previous losses	.738
V	**IMPULSIVITY**	**Factor Loadings**
IMP2	I act on the spur of the moment	.899
IMP1	I act on impulse	.876
IMP3	I buy things on impulse	.808

VI	**OPTIMISM**	**Factor Loadings**
OPT1	Nothing can go wrong	.855
OPT3	I need to keep busy	.844
OPT2	I am always optimistic about my future	.770
VII	**OPTIMUM STIMULATION LEVEL**	**Factor Loadings**
OSL2	I like having change and making novel experiences in everyday life	.851
OSL4	I always seek new ideas and experiences	.841
OSL5	It is appealing to me to do something different always	.810
OSL1	I like doing something new or different than always doing the same things	.793
OSL3	I prefer to lead a life that facilitates change, variety, and travel even if I have to meet unexpected situations	.779
VIII	**SUBJECTIVE NORMS**	**Factor Loadings**
SN2	Most people in my life whose opinions I value would approve of me gambling in a casino	.890
SN1	Most people who are important to me think I should gamble in a casino	.890
IX	**GAMBLING SEVERITY**	**Factor Loadings**
GI1	Bet more than you could afford to lose	.865
GI8	Felt that your gambling had caused financial problems for you or your household	.814
GI9	Felt guilty about the way you gamble or what happens when you gamble	.781

GI2	Needed to gamble with larger amounts of money to get a feeling of excitement	.779
GI3	Gone back another day to try and win back the money you lost	.777
GI7	People criticized your betting or told you that you have a gambling problem	.776
GI4	Borrowed money or sold anything to get money to gamble	.756
GI6	Felt that gambling had caused you health problems, including stress and anxiety	.745
GI5	Felt that you might have a problem with gambling	.735

The tables given above show the factor loadings. The loadings have been extracted using a cut-off value of 0.5 for the elimination of variables.

5.4 TESTS OF DIMENSIONALITY THROUGH CONFIRMATORY FACTOR ANALYSIS (CFA)

CFA provides useful information about scale dimensionality and validity (Hunter and Gerbing, 1982). It is used when the study constructs are measured using multiple items, when the items have a linear relationship to the scale total or average, and when there is a- prior idea about the scale. CFA determines whether the measurement of items, their factors, and functions are the same across two independent samples or within the same sample measured at different time intervals.

The researcher conducted a Confirmatory factor analysis using AMOS version 25. Confirmation of factors is based on the fit indices, ranging from 0 to 1, and values above 0.8 and closer to 1 suggest a good model fit (Worthington and Whittaker, 2006). Normed Fit Index (NFI) or Bentler- Bonett Index is the first measure of fit (Bentler and Bonnet, 1980). A value between .80 and .90 is considered acceptable, above .90 is good, and below .80 is considered a poor-fitting model. Tucker Lewis Index (TLI) and Comparative Fit Index (CFI) depend on the average size of the

correlation in the data. TLI is directly proportional to the correlation between variables. Root Mean Square Error of Approximation (RMSEA) is the most popular measure of model fit. It signifies the average residual value obtained from the variance-covariance matrix fit in the hypothesized model to the variance-covariance matrix in the sample data (Byrne, 2010). MacCallum, Browne, and Sugawara (1996) indicated 0.01 as excellent, 0.05 as good, and 0.08 as acceptable fit. Most other researchers consider 0.10 as a cut off for poor model fit.

5.5 RESULTS OF THE ANALYSES

The following section indicates the analysis of structural equations modeling based on a two-step process. At the first stage, the measurement model has been done, and the validity of the constructs has been established. The measurement model has been given in Figure 5.1.

5.5. A Measurement Model

A measurement model is used to define relations between the observed and unobserved variables. In other words, it provides the link between scores on a measuring instrument (i.e., the observed indicator variables) and the underlying constructs they are designed to measure (i.e., the unobserved latent variables). The measurement model, then, represents the CFA model described earlier in that it specifies the pattern by which each observed measure loads on a particular factor. Measurement model validity is estimated based on acceptable values of the model fit indices and the evidence of construct validity (Byrne, 2013). Figure 5.1 indicates the measurement model signifying the relationships between the observed and unobserved variables.

Figure 5.1 Measurement Model

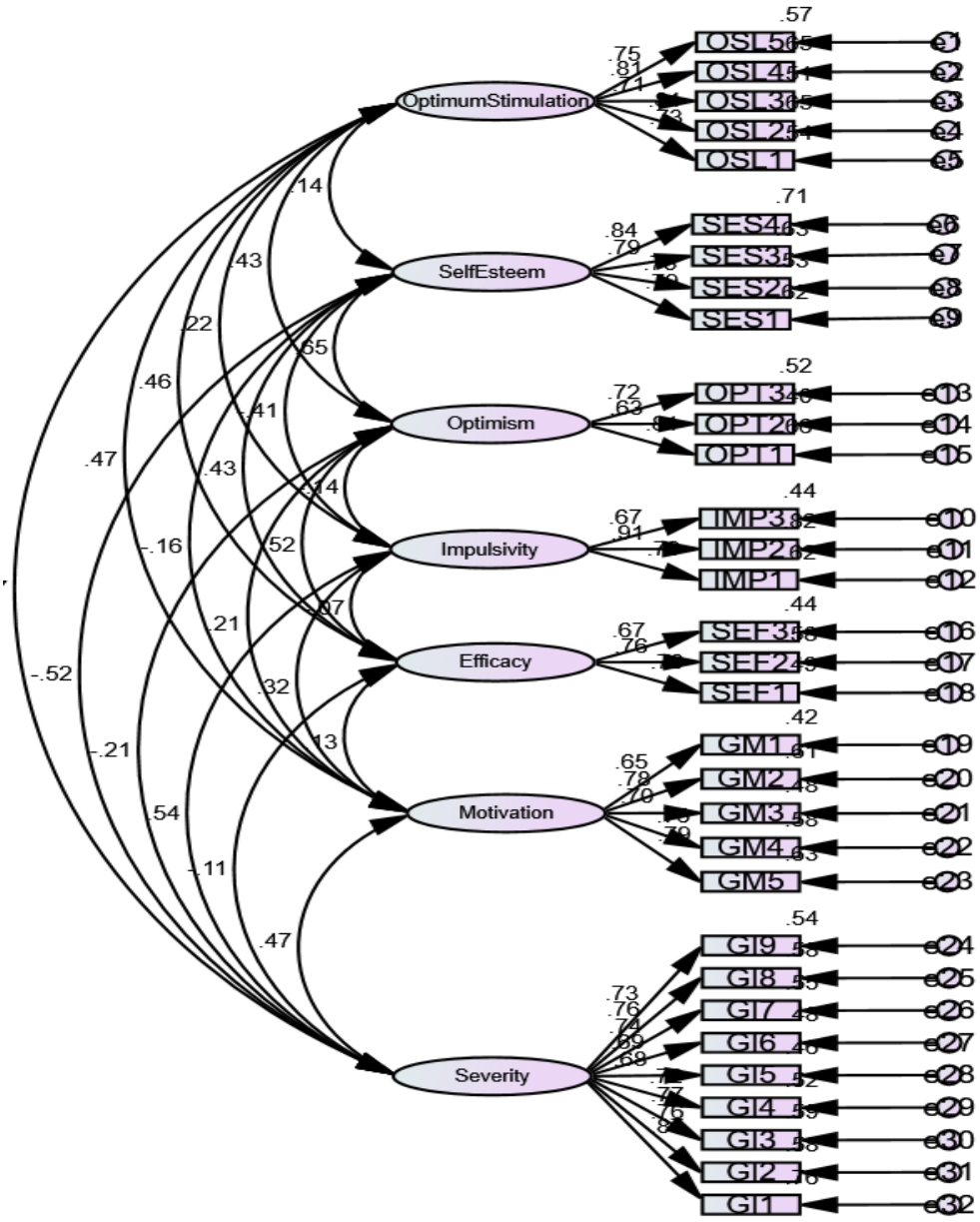


Table 5.5.1 Validity of Constructs

	CR	AVE	MSV	Max R(H)	OSL	Eff	Est	Moti	Imp	Opti	GSI
OSL	0.874	0.583	0.222	0.878	0.763						
Eff	0.754	0.506	0.267	0.760	0.461	0.711					
Est	0.868	0.622	0.428	0.873	0.144	0.428	0.789				
Moti	0.857	0.546	0.222	0.864	0.471	0.135	-0.162	0.739			
Imp	0.832	0.627	0.289	0.875	0.225	-0.073	-0.412	0.320	0.792		
Opti	0.769	0.528	0.428	0.787	0.429	0.517	0.654	0.214	-0.145	0.727	
GSI	0.920	0.563	0.289	0.926	0.174	-0.114	-0.521	0.467	0.538	-0.207	0.750

No Validity Concerns
- Wahoo!

The Composite Reliability of constructs is more than 0.7, which indicates excellent reliability of constructs. The average variances extracted for all the constructs are more than 0.5, indicating high construct validity levels. Mean shared variances for all the constructs are less than the average variance extracted. The square root of average Variance extracted is more than the correlations for all the constructs indicating high discriminant validity levels. Table 5.5.1 provides the results of the validity analysis of constructs. Model fit for the measurement model is at an acceptable level. Table 5.5.2 provides the different fit indices of the measurement model.

Table 5.5.2 Model Fit Summary of Measurement Model

	CMIN/DF	RMR	GFI	NFI Delta1	TLI rho2	CFI	RMSEA	PCLOSE
Default model	2.183	.092	.814	.805	.868	.882	.068	.000

The fit indices show an acceptable level of fit between data and model. The validity of constructs is indicated by acceptable levels of fit for the measurement model and a separate test for reliability and validity.

5.5. B Structural Model

A structural model defines relations among the unobserved (or latent) variables. Accordingly, it specifies the manner by which particular latent variables directly or indirectly influence (i.e., "cause") changes in the values of certain other latent variables in the model (Byrne, 2013).

Figure 5.2 indicates the structural model signifying the relationships among personality traits, gambling motivation, and gambling severity. The model has acceptable levels of fit. Table 5.6.2 provides the fit indices of the structural model

Figure 5.2 Structural Model

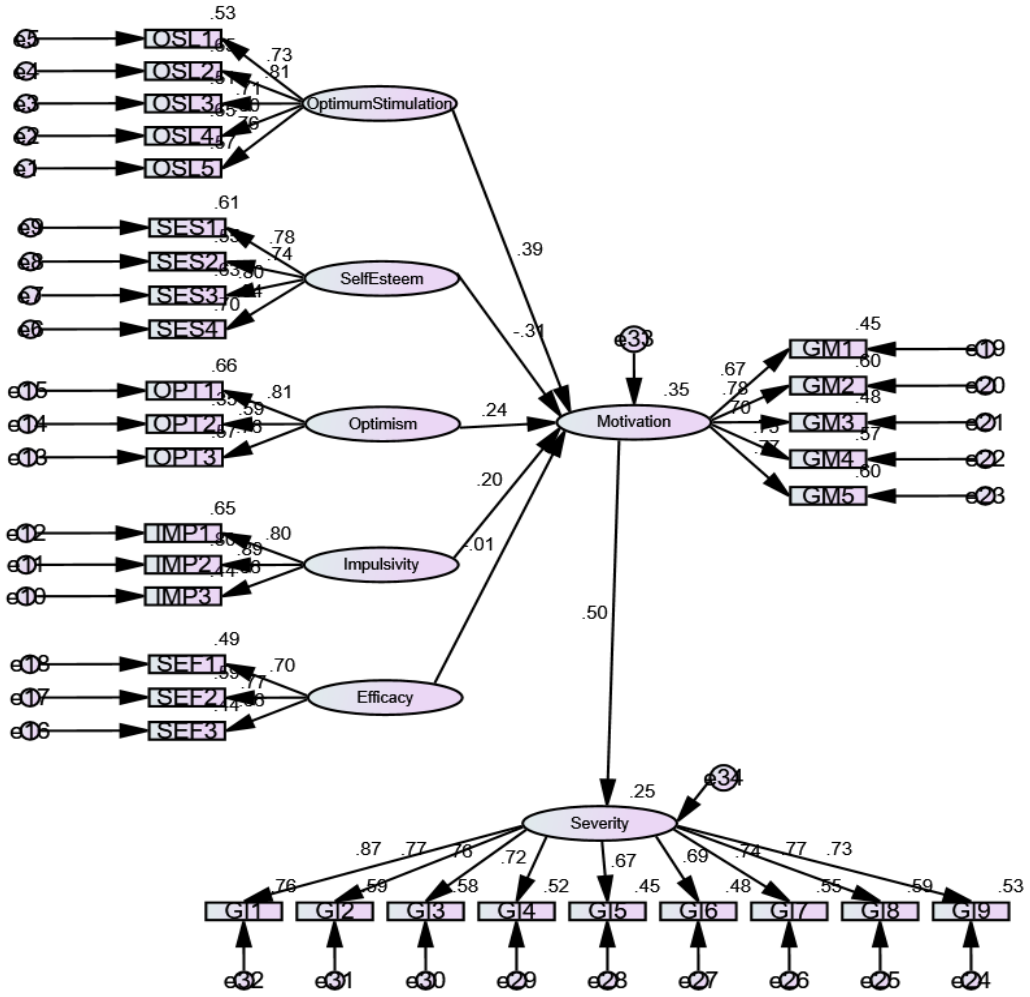


Table 5.5.3 Model Fit Summary of Structural Model

	CMIN/DF	RMR	GFI	NFI Delta 1	TLI rho2	CFI	RMSEA	PCLOSE
Default model	2.833	.138	.746	.738	.796	.812	.085	.000

The relationships stated in the hypotheses and tested using the structural model has been provided in Table 5.5.4. The table indicates the constructs, estimate of relationships, standard errors, critical ratios, and corresponding probabilities. Whether each hypothesis has been supported or not is also indicated in the same table.

Table 5.5.4 Regression Weights: (Group number 1 - Default model)

			Estimate		C.R.	P	Inference
Motivation	<--	Optimum Stimulation	.712	.131	5.434	***	Supported
Motivation	<--	Self Esteem	-.543	.119	-4.571	***	Supported
Motivation	<--	Optimism	.422	.121	3.483	***	Supported
Motivation	<--	Impulsivity	.492	.161	3.053	.002	Supported
Motivation	<--	Efficacy	-.044	.233	-.190	.850	Not Supported
Severity	<--	Motivation	.206	.033	6.336	***	Supported

The relationship of the personality traits of optimum stimulation level, self-esteem, optimism, and impulsivity with gambling motivation has been significantly high at the 1% level. While the results indicated optimum stimulation level and optimism and impulsivity were positively related to gambling motivation, self-esteem was negatively related to gambling motivation. Self-efficacy does not have a significant relation to gambling motivation. Gambling motivation was further found to predict gambling severity at 1% level of significance. Table 5.5.4 indicates the regression weights of the paths and their corresponding P values.

5.5. C Mediation

While direct effect is the relationship between the independent variable (IV) and the dependent variable (DV), mediating effect is the effect of a third variable on the direct relationship as depicted in figure 5.3. Application of a mediator explains why a particular relationship exists between the two constructs. While direct relationship is presented using a single headed arrow between independent variable and dependent variable, indirect effect is presented through a sequence of more than one arrow. The

effect is called full mediation if the relationship between the two constructs is fully explained by the mediator. However, the effect is said to be partial mediation if some relationships between the independent and dependent constructs still remain unexplained by the mediator (Hair et al., 2010). The independent variables used in this study are the personality traits. Gambling severity is the dependent variable and the mediator variable is gambling motivation shown in figure 5.4.

Figure 5.3: Picture Depiction of Relationships

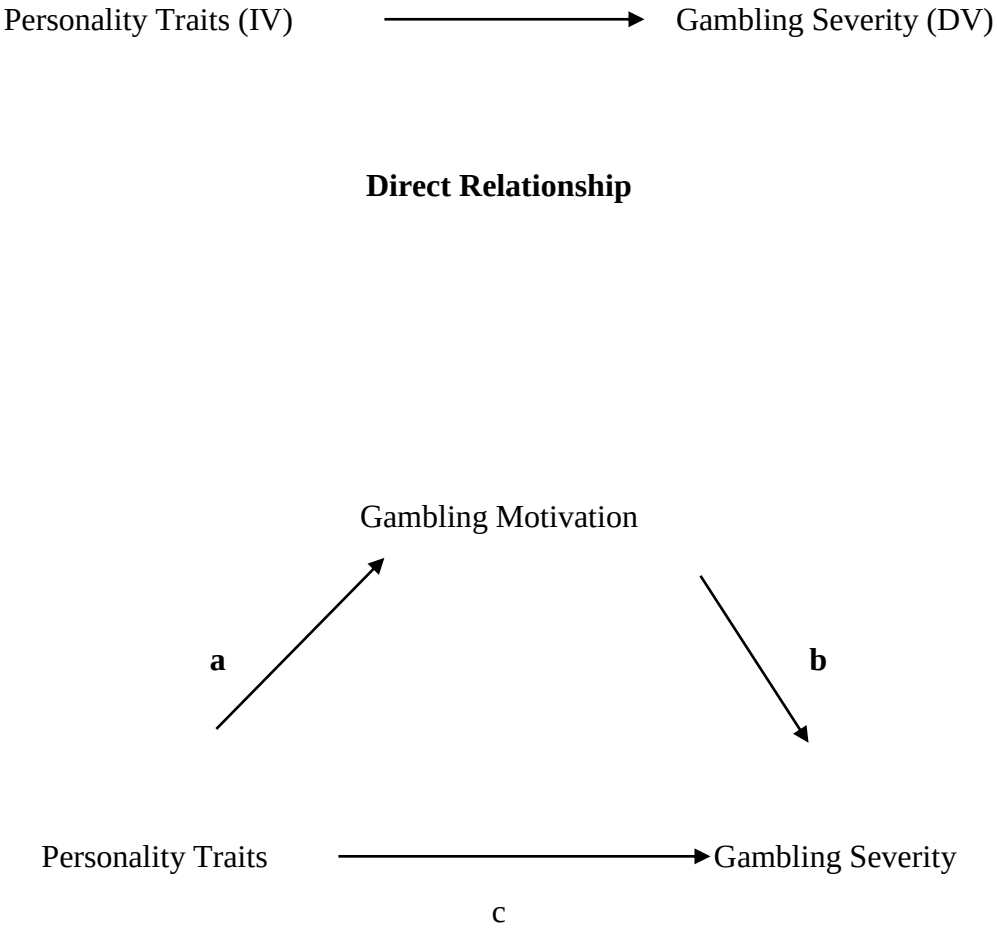
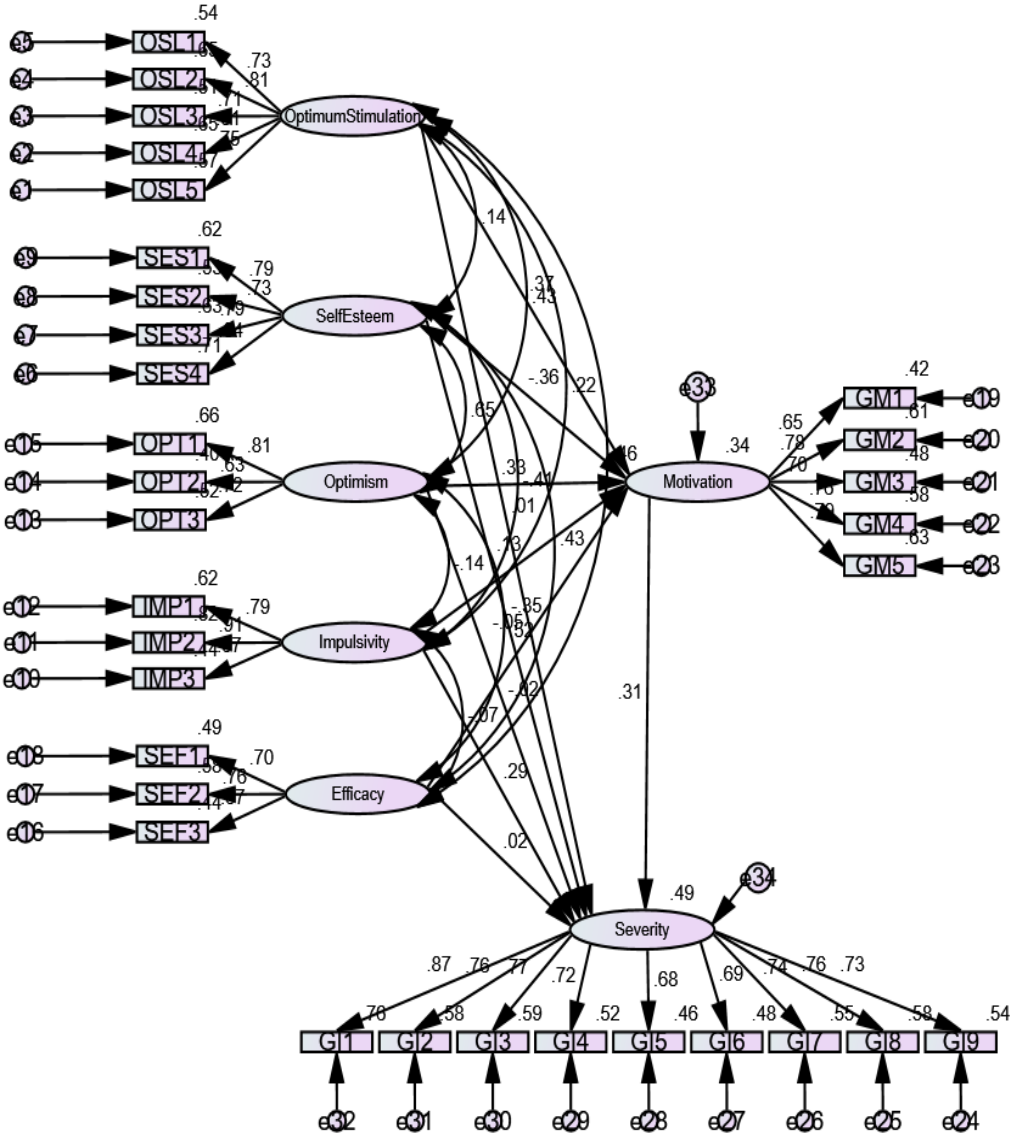


Figure 5.4 Structural Model Depicting the Mediation Effect of Gambling Motivation



The structural model, which tested the mediating effect of gambling motivation, is provided in Figure 5.4. Bootstrapping is used to conduct the analysis. Table 5.5.5 gives the result of the analysis. Gambling motivation fully mediates the relationship between optimism and gambling severity and between optimum stimulation level and gambling severity. On the other hand, gambling motivation partially mediates the relationship between impulsivity and gambling severity and self-esteem and gambling severity. Self-efficacy did not have either a direct or mediated effect on gambling severity.

Table 5.5.5 Mediation Results

	Indirect Effect	Significance	Direct Effect	Significance	Remark
Efficacy-Motivation-Severity	-.020	.585	.027	.779	No effect
Optimism-Motivation-Severity	.079***	.002	-.014	.862	Full Mediation
Impulsivity-Motivation-Severity	.043*	.075	.295***	.003	Partial Mediation
Self Esteem-Motivation-Severity	-.083***	.003	-.254**	.016	Partial Mediation
Optimum Stimulation - Motivation-Severity	.090***	.000	.008	.920	Full Mediation

5.5. D Moderation

Moderating effects is the effect of another variable altering the relationship between two constructs. If the relationship between the two constructs is affected depending on the third variable, the relation is said to have a moderating effect by including the third variable. Since it involves structural testing model estimates, it is considered as an extension of multi-group analysis.

5.5. D (I) Moderation Effect of Subjective Norms

Multi-group analysis is performed by comparing similar models in which two or more samples of participants are compared using similar models. Assessment of similarities between groups is done using between groups constraints on any model parameter(s) with an objective to find if there is a difference between individual structural group models. Group model comparisons identify the degree of difference for the entire model or a specific path or relationship. Two models compared to check the moderating effect of subjective norms are given below. While Figure 5.5 assessed the participants high on subjective norms figure 5.6 was analysed with participants low on subjective norms.

Figure 5.5 Moderation Effects of High Subjective Norms

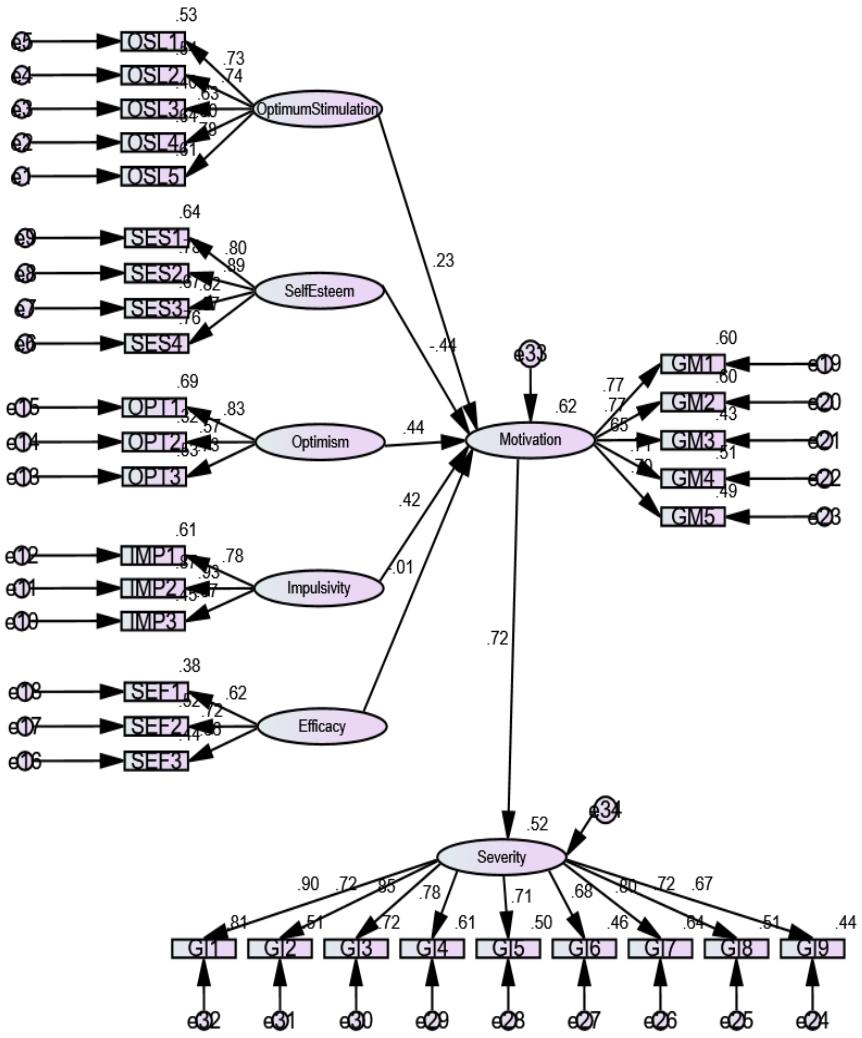
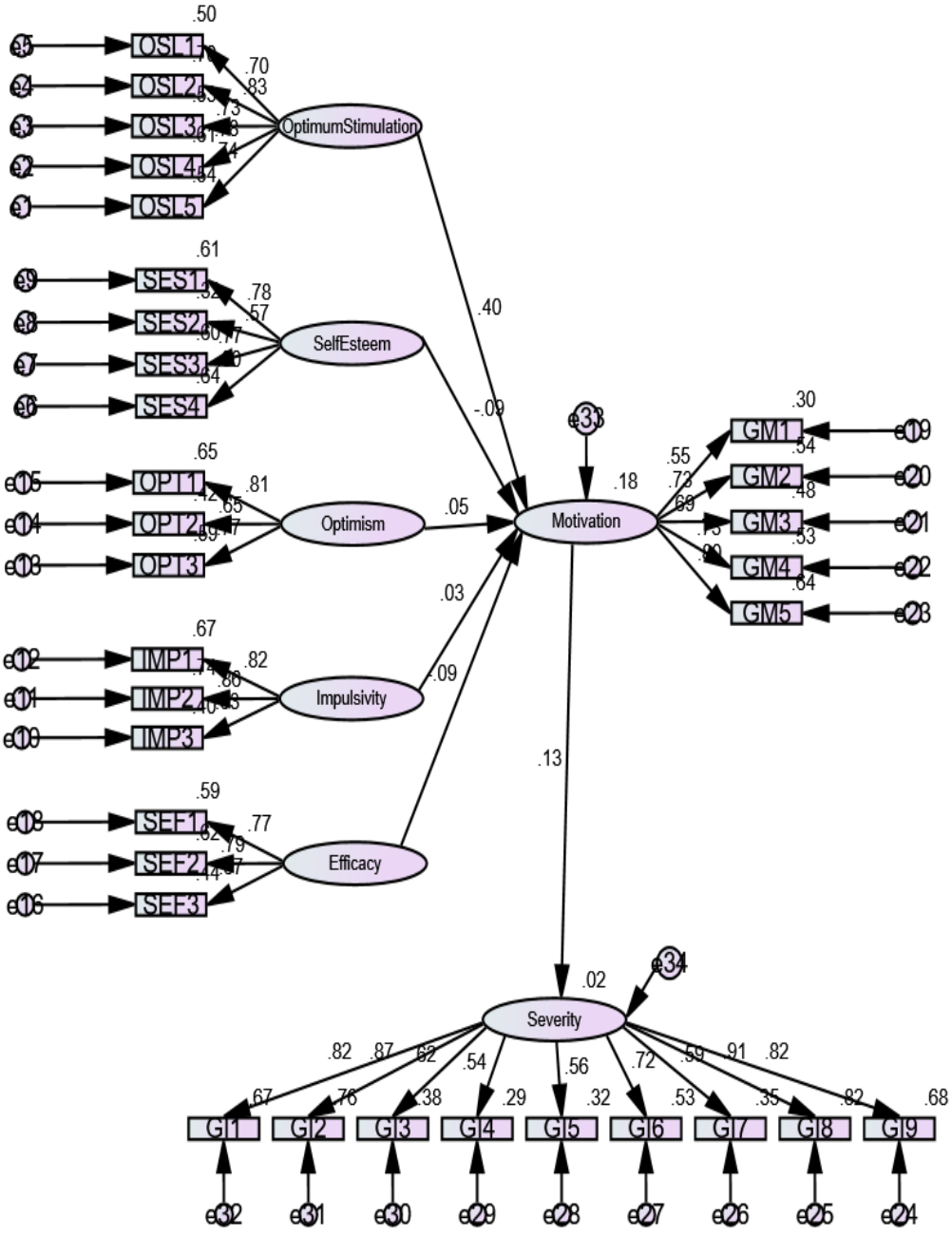


Figure 5.6 Moderation Effects of Low Subjective Norms



The analysis showed that subjective norm has a major moderating effect on the relationships between personality traits like self-esteem, optimism, impulsivity, and gambling motivation. Influence is higher for respondents with high levels of subjective norms in the case of self-esteem, optimism, and impulsivity. Subjective norm does not have any moderating impact on the relationship between personality traits, optimum stimulation level, and self-efficacy, and gambling motivation. Also, the relationship between gambling motivation and gambling severity was moderated by subjective norms. The relationship is stronger for people with higher subjective norms.Table 5.5.6 indicate the moderation analysis results related to subjective norms.

Table 5.5.6 Group Difference of High and Low Subjective Norms

Regression Weights: (High Norms - Default model)									
			High Norms		Low Norms				
			Estimate	P	Estimate	P	Label	Label	z-score
Motivation	⇦	Opt. timu.Level	0.501	0.007	0.592	***	par_57	par_26	-0.367
Motivation	⇦	Self Esteem	-0.796	***	-0.143	0.332	par_58	par_27	-2.988***
Motivation	⇦	Optimism	0.928	***	0.066	0.612	par_59	par_28	3.434***
Motivation	⇦	Impulsivity	1.083	***	0.056	0.784	par_60	par_29	3.159***
Motivation	⇦	Efficacy	-0.026	0.938	-0.273	0.334	par_61	par_30	0.562
Severity	⇦	Motivation	0.257	***	0.072	0.158	par_62	par_31	2.711***

Differences between models are compared using a chi-square difference test which indicates if there is a significant decrease in the model fit (increase in the chi-square) after the estimates are constrained to be equal. A difference between models that is statistically significant indicates difference in the path estimates and indicates that moderation does exist. While testing for moderation, the researcher looks out for significant difference in the two models that will support the hypothesis that there is a difference in the path estimates. Table 5.5.7 indicates the difference in model fit after introducing the moderator variable subjective norms.

Table 5.5.7 Group Difference in Chi-Square (Subjective Norms)

	Chi-square	df	p-value	Invariant?	
Overall Model					Step 1. Provide chi-square and df for unconstrained and constrained models, and provide the number of groups. The thresholds (green cells) will be updated automatically.
Unconstrained	1986.22	916			
Fully constrained	2175.393	947			
Number of groups		2			
Difference	189.173	31	0.000	NO	Groups are different at the model level. Check path differences.

5.5. D (II) Moderation Effect of Risk Propensity

Multi-group analysis is performed by comparing similar models in which two or more samples of participants are compared using similar models. Assessment of similarities between groups is done using between groups constraints on any model parameter(s) with an objective to find if there is a difference between individual structural group models. Group model comparisons identify the degree of difference for the entire model or a specific path or relationship. Two models compared to check the moderating effect of risk propensity are given below. While Figure 5.7 assessed the participants high on risk propensity figure 5.8 was analysed with participants low on risk propensity. These figures provide the structural models of different groups with associated path coefficients.

Figure 5.7 Moderation Effects of High Risk

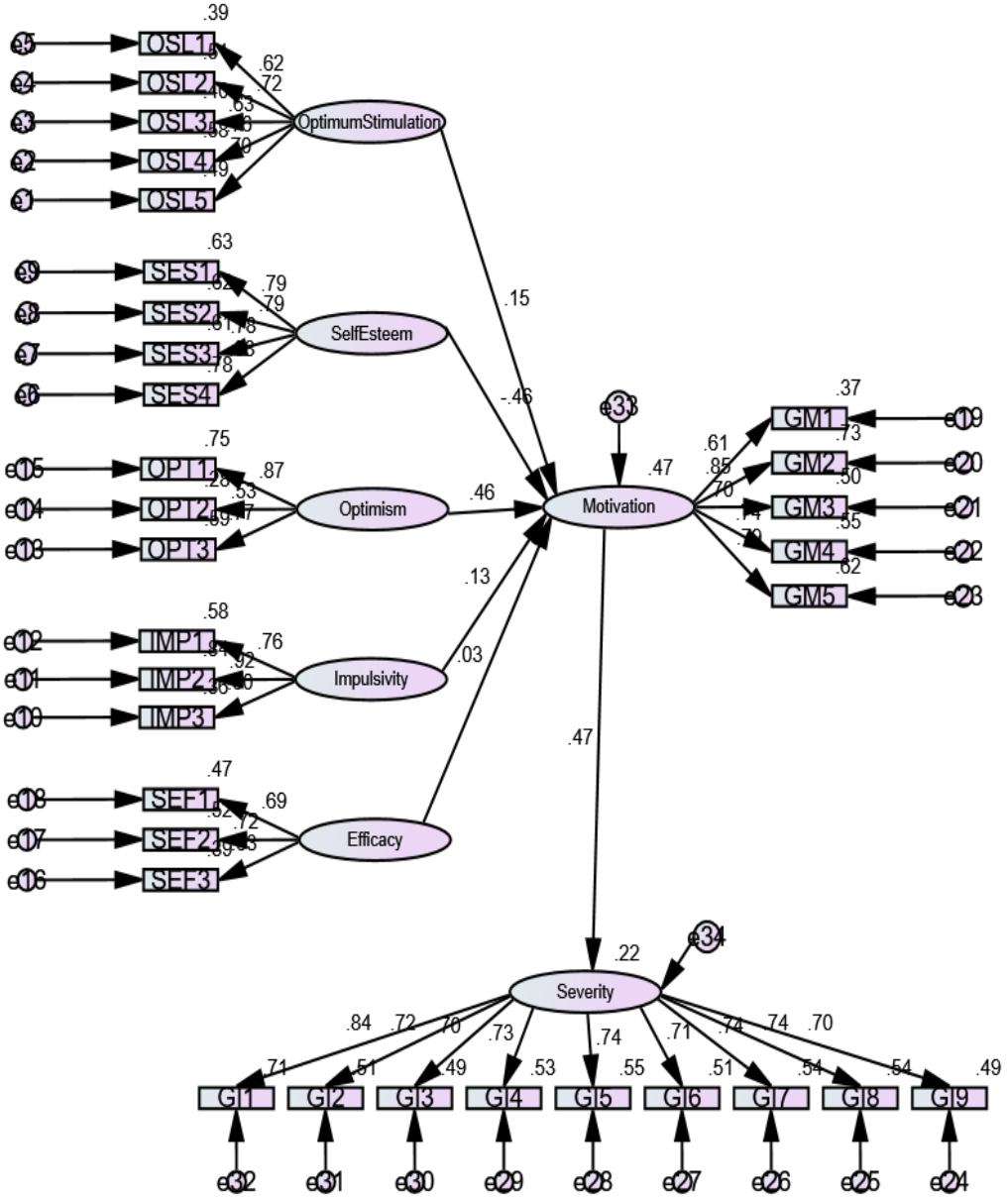
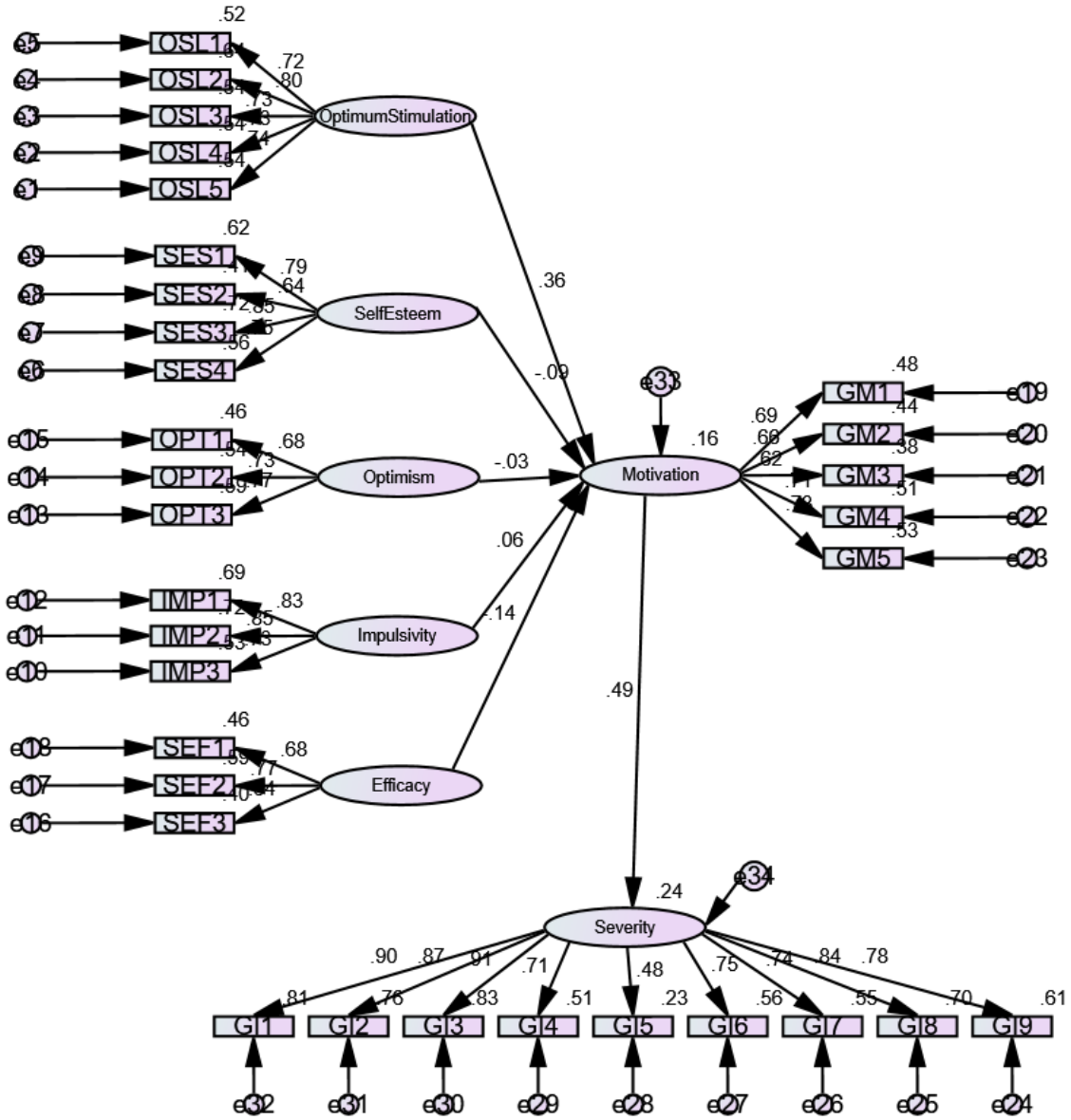


Figure 5.8 Moderation Effects of Low Risk



A multi-group moderation analysis has been performed on the structural model by doing a median spilt of risk propensity to test the differences in the path coefficients between different risk propensity levels. The analysis showed that two paths, which are between optimism and gambling motivation and between self-esteem and gambling motivation, are moderated by risk propensity. The group which is high in risk propensity was found to have a significantly pronounced relationship in both the paths. In contrast, self-esteem had a negative relation with gambling motivation optimism had a positive relation.

The test of group differences revealed that both the path coefficient had a significant difference, and the models were different based on chi-square comparison. The results of path comparisons and model comparison are provided in table 5.5.8 and 5.5.9, respectively.

Table 5.5.8 Group Difference of High and Low Risk Propensity

Regression Weights: (Risk High - Default model)									
			Risk High		Risk Low				
			Estimate	P	Estimate	P	Label	Label	z-score
Motivation	⇦	Opt. Stimulat aion	0.302	0.085	0.648	0.001	par_ 57	par_ 26	-1.305
Motivation	⇦	Self Esteem	-0.682	***	-0.183	0.347	par_ 58	par_ 27	-2.041**
Motivation	⇦	Optim-ism	0.704	***	-0.047	0.793	par_59	par_ 28	3.09***
Motivation	⇦	Impulsi-vity	0.313	0.12	0.134	0.545	par_60	par_ 29	0.597
Motivation	⇦	Efficac y	0.109	0.716	-0.528	0.196	par_61	par_ 30	1.259
Severity	⇦	Motiva-tion	0.242	***	0.16	***	par_62	par_ 31	1.178

Table 5.5.9 Group Difference in Chi-Square (Risk Propensity)

	Chi-square	df	p-value	Invariant ?	
Overall Model					Step 1. Provide chi-square and df for unconstrained and constrained models, and provide the number of groups. The thresholds (green cells) will be updated automatically.
Unconstrained	2386.056	916			
Fully constrained	2457.72	947			
Number of groups		2			
Difference	71.664	31	0.000	NO	Groups are different at the model level. Check path differences.

Chapter 6

DISCUSSION AND CONCLUSION

CHAPTER 6

DISCUSSION AND CONCLUSION

This chapter provides a brief discussion of the findings in relation to previous research. The primary focus of this study was to identify the influence of the determinants on gambling motivation. The most popular theory of human motivation, self-determination theory, built on the premise that motivation leads to behavior and social cognitive theory, which focuses on the dynamic relationship between the personal, environmental, and behavioural determinants resulting in behavioural outcomes, served as the overall theoretical base for this research. Since this study aimed to explore the mediating role of gambling motivation on the relationship between the antecedents of gambling and gambling severity, the influence of the antecedents on gambling severity was also tested. Risk propensity and subjective norms are studied for their moderating influence across different relationships.

6.1 DISCUSSION

This study has found a significant positive relationship between optimum stimulation level and gambling motivation. Optimum stimulation level represents the threshold of excitement required for a person. Those who are high on optimum stimulation level will require higher levels of external arousal to satisfy them. Since individuals with high OSL are constantly bored, they resort to environmental stimuli when their stimulation level falls below their optimum threshold (Olsen et al., 2015). The environmental stimuli they resort to are entertainment or leisure activity (Richard et al., 2010). Gambling is one of the leisure activities which provide arousal and excitement (Mowen et al., 2009). OSL positively correlates with risk-taking behavior (Raju, 1980) and the risk associated with gambling increases the arousal desired by high individuals with higher levels of optimum stimulation.

The optimum stimulation level is related to the intention to gamble (Wolfgang, 1988), gambling frequency and volume of gambling (Anderson and Brown, 1984; Dickerson, Hinchy, and Fabre, 1987; Kuley and Jacobs, 1988), and loss of control (Coventry and Hudson, 2001). This study confirms most of the findings of the previous literature in the specific context of gambling motivation. Gambling is an activity that involves both pleasures of gaming and the risk of losing or winning money. Gambling is

associated with excitement, arousal, risk, and thrill (Coventry and Norman, 1997; Coventry and Hudson, 2001; Mowen, Fang, and Scott, 2009). The risk and uncertainty associated with gambling are highly arousing (Zuckerman, 1994). Given these characteristics associated with gambling, people high on optimum stimulation level are expected to gain the required stimuli from gambling (Breen and Zuckerman, 1999).In summary, those gamblers who seek higher levels of stimulation are motivated to gamble more. This could also be due to the fact that people who require external stimuli engage in gambling to obtain excitement and thrill as gambling increases physiological arousal, which is desired by those with high sensation needs.

Self-esteem was found to have a negative relationship with gambling motivation. Self-esteem is a positive feeling of self-worth. Gambling is an activity that is considered not productive and also negative by many societies. It is also considered that people with control do not indulge in gambling and many people consider gambling synonymous with addiction. Individuals with low self-esteem engage in addictive behavior (Marlatt et al., 1988; Taylor and Brown, 1988). Positive feelings of self-esteem make people believe that they are controlled and normally have good habits. High self-esteem is associated with various positive psychological outcomes, including positive emotion and pro-social behavior (Leary and MacDonald, 2003). In contrast, low self-esteem shows social problems and inconsistent self-concepts. People with low self-esteem do not value themselves worthy, tend to surrender to peer pressure, and engage in addictive behavior. They try to avoid the feelings of inferiority and shame by engaging in behaviors like gambling. Craig and Mayo (1995) reported that people who hold negative evaluations about themselves use addictive substances or engage in the addictive process to escape or withdraw from their low self-beliefs.

Self-esteem plays a major role in motivating people to engage in divergent behavior. Individuals low on self-esteem engages in high-risk activities to escape from reality. The association between low self-esteem and risky behavior has been established by researchers like (As¸c¸i et al., 2007; Bahaeloo-Horeh and Assari, 2008; Willig, 2008). Our study confirms the negative relationship between self-esteem and gambling motivation. People with low self-esteem tend to have higher gambling motivation is supported by the literature discussed above.

Studies on optimism proved that optimists tend to be happier than pessimists and involve in challenging activities (Peterson and Chang, 2003). Optimists have a higher risk propensity when compared to pessimists (Xie, 2001). These studies justify our research finding that optimism is positively associated with gambling motivation.

Optimism affects risk-seeking behaviors, such as gambling (Kuhnen and Knutson, 2011).Because of their generalized expectations for positive outcomes, people high on optimism tend to continue gambling even in adverse situations. Gibson and Sanbonmatsu (2004) found that optimists continued gambling even after negative outcomes while pessimists withdraw in a similar situation. This can be attributed to optimists' illusion that they can control the situation, and the outcome will always be positive.

Some studies established a negative relationship between optimism and gambling, attributing the association with optimists' realistic nature (Krentzman, 2013). There are fewer chances for optimists to get into addiction since they consider life more meaningful and become resistant to addiction (Akhtar and Boniwell (2010).

Although the literature has contradictory reporting about the role of optimism, this study confirms a positive relationship between optimism and gambling. Optimistic people are more likely to think that they will win and hence be motivated to stake higher amounts. Another reason for this positive relation could be optimists' quest for better social relations, entertainment, and excitement associated with leisure gambling.

People with high impulsivity are unable to resist temptations and react immediately (McCown et al., 1993). This attribute of impulsive individuals leads them to various addictions. Impulsivity is the inability to stop initiated actions, sensation and excitement seeking, risky behavior, shorter reaction time, lack of consideration of consequences of actions, and immediate gratification (Wiers et al., 2010). Since gambling is an activity that serves as an outlet for the above-discussed behaviors, impulsive people are more likely to be addicted to gambling.

Gambling is an addictive behavior which involves huge risk. Gambling provides

excitement and thrill to the players. Because impulsive people are more prone to seek entertainment that provides them quick and continuous stimulation, they may be at risk of developing gambling problems because gambling often involves a high degree of sensory and mental stimulation (Nower et al., 2004). This study's findings align with the extant literature, which confirms a positive relationship between impulsivity and gambling motivation.

Self-efficacy is the self-perception of one's capabilities. Low self-efficacy has been associated with addictive behaviors (Ricketts and Macaskill, 2004; Lin, Ko, and Wu, 2008). Marlatt, Baer, and Quigley (1997) confirmed that high self-efficacy helps to prevent addictions. Avolio et al. (2004) found that lower self-efficacy was associated with higher gambling problems, similar to the earlier measurement by South Oak Gambling Screen (Lesieur and Blume, 1987).

Weiner and Craighead's (2010) study argued that individuals with high self-efficacy attribute failure to insufficient efforts and increase their efforts in case of negative outcomes and tend to get addicted. According to Griffiths (2013), who studied the role of self-efficacy on internet addiction, abnormal behavior, or consumption arises when individuals tend to have positive expectations and self-efficacy perception. This illusion will lead to compulsive consumption or behavior in the long run. Individuals high on self-efficacy will have the illusion that they can control the outcome. With this hope, they tend to continue to engage in risky activities even when the situation becomes adverse. This holds in gambling too, where people with high self-efficacy continue even after losing. Many previous self-efficacy studies have established a positive association between self-efficacy and gambling (Casey et al., 2008; Oei et al., 2008; Jeong and Kim, 2011). Considering that people with low self-efficacy do not persist in behavior when situations tend to become adverse, it is more likely individuals with low self-efficacy will quit gambling when their luck turns bad. On the other hand, individuals high on self-efficacy will continue gambling in adverse situations believing they can control the situation and recover the loss.

Literature has contradictory reporting about the role of self-efficacy. This study found no relation between self-efficacy and gambling motivation. The argument for positive relation is a belief in one's abilities, which assumes that winning is possible with one's capabilities. Negative relationships are posited with the argument that self-

efficacy leads to productive engagement, making people stay away from addictive behavior. However, the present study did not support both these views.

Motivational models of addictions can help understand addictive behaviors like substance addiction (Stewart and Dingier, 2000). Gambling literature suggests that one's gambling motivation affects gambling-related behaviors (Ong et al., 2007). Individuals tend to pursue certain behavior only if they are motivated to perform the same. This notion is applicable in gambling behavior too. Greater motivation to gamble predicts increased frequency (Pantalon et al., 2008; Stewart and Zack, 2008).

This study confirms a positive relationship between gambling motivation and gambling severity. Gambling severity could be higher frequency, more time, and higher stakes. According to consumer behavior theories, motivation triggers all behavior. The findings of this study uphold this view.

Researchers have examined the influence of subjective norms on various behaviors. The majority of these studies show a positive relationship between subjective norms and behaviors.

There are contradictory findings of the influence of subjective norms on gambling. Studies examining the effect of subjective norms on gambling severity have found favorable norms correlated with problematic gambling (Moore and Ohtsuka, 1999; Neighbors et al., 2015; Canale et al., 2016). Some other researchers established an opposite finding that subjective norm was negatively correlated to gambling (Neighbors et al., 2007; Martin et al., 2010). This is mainly because individuals motivated to gamble will consider their interests rather than consider significant others' opinions. Researchers Bagozzi et al. (2004) and Wu and Tang (2012) found that the effect of subjective norms on gambling is negligible. They attribute this finding to the fact that individual behavior is more dependent on personal attitude than the influence of important others.

Rivis and Sheeran (2003) established the moderating effect of descriptive norms on intention and behavior. Lam, Baum, and Pine (2003) examined the moderating role of subjective norms on job satisfaction and turnover intention in the tourism industry in Hong Kong. Shan and King (2015) examined the moderating role of subjective norms on attitude and behavior related to viral advertising. They found subjective norms

influenced the relationship between attitude and behavior. Because serving as perceived social pressure, subjective norms may moderate the relationship between attitude toward gambling and the intention of gambling; this study tested the moderating role of the subjective norm. We have tested whether subjective norm moderates the relationship between personality and gambling motivation and gambling motivation and gambling severity.

Our study confirmed that subjective norm accentuates relationships. While self-esteem was negatively related to gambling motivation, this relationship was stronger among gamblers with high subjective norms. The relationships between optimism and impulsivity, and gambling motivation were also stronger for gamblers with high subjective norms. The same is true for the relationship between gambling motivation and gambling severity. On the whole subjective norm had an accelerating effect on the relationships.

Risk propensity is an individual's consistent tendency to take risks across situations. Risk propensity depends on the individual's motive, irrespective of the general approach or domain-specific approach is being used (Meertens et al., 2008). Various domains have established a positive association between risk propensity and risky behavior.

Although researchers agree that risk propensity is associated with addictive behaviors (Aklin et al., 2005; Lejuez et al., 2007; Williams et al., 2010), whether risk propensity moderates the relationship between the addiction and severity is sparsely researched (Del Casale et al., 2019). There are very few studies examining the moderating role of risk propensity, of which almost all have examined the moderating role of risk propensity in association with alcohol addiction. Clay et al. (2018) established a moderating role of risk propensity on the relationship between stress and alcohol craving. Del Casale et al. (2019) established the moderating role of risk propensity on the relation between alcohol addiction and severity.

Vong (2007) ascertained the moderating role of risk propensity on gambling motivation. Our study too confirmed the moderating effect of risk propensity on gambling.

The negative relationship between self-esteem and gambling motivation was stronger for gamblers with high-risk propensity. This is a surprising finding as normally, people with high-risk propensity will have higher gambling motivation. However, risk propensity reduced gambling motivation among people with high self-esteem. Further, risk propensity increased the relationship between optimism and gambling motivation. It means that gamblers with high optimism are motivated to gamble more if they have a high risk propensity.

6.2 CONTRIBUTION OF THE STUDY

This study established that personality traits like optimum stimulation level, optimism, and impulsivity positively influenced gambling motivation, and gambling motivation leads to gambling severity. The study also found that various personality traits have varying levels of impact on gambling motivation and gambling severity. Self-esteem proved to have a negative influence on gambling motivation. Self-efficacy seemed not to affect gambling motivation. This study established the mediating role of gambling motivation. Variables like risk propensity and subjective norms moderate the relationships in the model, proving the moderating effects of these variables.

The study extends personality research by establishing many personality variables accounting for motivation and severity. Most of the personality traits examined proved to have a direct relationship to gambling motivation. This means altering personality traits will have a significant influence on gambling motivation. Subjective norms and risk propensity influence the relation between gambling motivation and gambling severity. Subjective norm is an external stimulus, and it can be influenced much easier than changing a personality trait. Hence, this variable could be adjusted to control gambling severity. Change in risk propensity will also have a direct effect on gambling motivation and severity. Altering the levels of risk propensity can have an immediate effect on gambling severity. Controlling behaviors like gambling are not as easy as personality is enduring. It will be interesting to note that measures to control gambling are not altering personality but are measures to change behavior.

6.3 MANAGERIAL IMPLICATIONS OF THE STUDY

Marketers of casinos may benefit from the study by identifying target personality

groups and designing and promoting entertainment and casinos using personality-related appeals. The study results will help provide insights into understanding consumer behavior elements that would enable marketers to design strategies to attract and sustain loyal casino customers.

These findings may be considered important implications in understanding the antecedents, motivation, and behavioral factors of casino gamblers, which will aid addiction counselors and social workers.

Thus, this study becomes relevant in its contribution to society in terms of knowledge, leading to social awareness and a revenue-producing opportunity.

6.4 DIRECTIONS FOR FUTURE RESEARCH

This study has considered gambling motivation as uni-dimensional, whereas future studies could check the differential impact of different dimensions of gambling motivation on gambling severity. Also, the differential impact of different personality traits on dimensions of gambling motivation could be tested.

Significant variables influencing the effect of personality traits on gambling motivation and severity could be identified to handle problem gambling. The prevalence of personality traits in the population could be checked with managerial implications for targeting casino customers.

It is evident that while some societies consider gambling as a taboo, some other societies permit gambling. There are social and cultural variables that work in favour of or against gambling. Hence cultural studies may be appropriate to be considered in the context of casino gambling.

While this study has considered domain free risk propensity as a moderating factor, it is possible to hypothesize that financial risk propensity might have a more significant moderating effect as far as the relationships in the model are concerned.

While this study takes an explanatory and predictive approach towards gambling severity, future studies may also focus on an approach for controlling gambling severity.

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APPENDICES

APPENDIX A

Dear Respondent,

I am Albino, a research scholar at the Department of Management Studies, Goa University, conducting my research on the effects of Motivation on Gambling Intensity, focusing mainly on casino customers. The purpose of my study is to learn about the personal factors that influence gambling motivation and in turn gambling intensity.

Your attitudes and opinions are critical to the success of my study. I request you to take some time out of your busy schedule to answer the questions honestly.

Rest assured that all the data gathered will be treated with utmost confidentiality and will only be available in aggregate. The data will be used for academic purpose only.

In case of queries please feel free to contact me at research.albino @gmail.com

Thank You for your time

Sincerely,
Albino Simple Tom
(Doctoral Research candidate)

Using the 1-4 scale below, please indicate your agreement with each statement by **encircling** the appropriate number.					
		Not at all true	Hardly true	Moderately true	Exactly true
1	I can manage to solve difficult problems if I try hard enough.	1	2	3	4
2	If someone opposes me, I can find the means and ways to get what I want.	1	2	3	4
3	It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4	I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5	Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6	I can solve most problems if I invest the necessary effort.	1	2	3	4
7	I remain calm when facing difficulties because of my coping abilities.	1	2	3	4
8	When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9	If I am in trouble, I can usually think of a solution.	1	2	3	4
10	I can usually handle whatever comes my way.	1	2	3	4

Please record the extent to which you agree or disagree with the following statement by **encircling** the option.

		Totally Disagree						Totally Agree
1	I like to take chances, although I may fail.	1	2	3	4	5	6	7
2	Although it has a high promise of reward, I do not want to be the first one who tries a new product. I would rather wait until it has been tested and proven before I try it.	1	2	3	4	5	6	7
3	When I have to make a decision for which the consequence is not clear, I like to go with the safer option although it may yield limited rewards.	1	2	3	4	5	6	7
4	I like to try new things, knowing well that some of them will disappoint me.	1	2	3	4	5	6	7
5	To earn greater rewards, I am willing to take higher risks.	1	2	3	4	5	6	7

Please record your agreement with each statement by **encircling** the appropriate number.					
		Strongly disagree	Disagree	Agree	Strongly agree
1	On the whole, I am satisfied with myself.	1	2	3	4
2	At times I think I am no good at all.	1	2	3	4
3	I feel that I have a number of good qualities.	1	2	3	4
4	I am able to do things as well as most other people.	1	2	3	4
5	I feel I do not have much to be proud of.	1	2	3	4
6	I certainly feel useless at times.	1	2	3	4
7	I feel that I'm a person of worth.	1	2	3	4
8	I wish I could have more respect for myself.	1	2	3	4
9	All in all, I am inclined to think that I am a failure.	1	2	3	4
10	I take a positive attitude toward myself.	1	2	3	4

Please indicate how often you gamble for the reasons listed below by **encircling** the appropriate response.								
		Never	Almost never	Some times	Half of the time	Most of the time	Almost Always	Always
1	To release daily stress	1	2	3	4	5	6	7
2	To be with people who enjoy the same things I do	1	2	3	4	5	6	7
3	To win money	1	2	3	4	5	6	7
4	For the challenge	1	2	3	4	5	6	7
5	Because casino games are enjoyable	1	2	3	4	5	6	7
6	To escape boredom	1	2	3	4	5	6	7
7	To be with friends	1	2	3	4	5	6	7
8	To win back previous losses	1	2	3	4	5	6	7
9	To practice casino games	1	2	3	4	5	6	7
10	Because casino games are exciting	1	2	3	4	5	6	7
11	To escape from everyday life	1	2	3	4	5	6	7
12	Because others (friends) are playing casino games	1	2	3	4	5	6	7
13	For a chance of winning a jackpot	1	2	3	4	5	6	7
14	To experience my achievement	1	2	3	4	5	6	7
15	Because casino games are interesting to me	1	2	3	4	5	6	7
16	To escape from overwork and responsibility	1	2	3	4	5	6	7
17	To meet new people	1	2	3	4	5	6	7
18	To learn casino games	1	2	3	4	5	6	7
19	To release tension	1	2	3	4	5	6	7
20	To take risks	1	2	3	4	5	6	7
21	Because I am curious	1	2	3	4	5	6	7

Read each statement and pick the appropriate option by **encircle** the number.					
		Never	Occasionally	Often	Always
1	I plan tasks carefully.	1	2	3	4
2	I do things without thinking.	1	2	3	4
3	I make-up my mind quickly.	1	2	3	4
4	I am happy-go-lucky.	1	2	3	4
5	I don't "pay attention."	1	2	3	4
6	I have "racing" thoughts.	1	2	3	4
7	I plan trips well ahead of time.	1	2	3	4
8	I am self controlled.	1	2	3	4
9	I concentrate easily.	1	2	3	4
10	I save regularly.	1	2	3	4
11	I feel or display discomfort at plays or lectures.	1	2	3	4
12	I am a careful thinker.	1	2	3	4
13	I plan for job security.	1	2	3	4
14	I say things without thinking.	1	2	3	4
15	I like to think about complex problems.	1	2	3	4
16	I change jobs.	1	2	3	4
17	I act "on impulse."	1	2	3	4
18	I get easily bored when solving tough problems.	1	2	3	4
19	I act on the spur of the moment.	1	2	3	4
20	I am a steady thinker.	1	2	3	4
21	I change residences.	1	2	3	4
22	I buy things on impulse.	1	2	3	4
23	I can only think about one thing at a time.	1	2	3	4
24	I change hobbies.	1	2	3	4
25	I spend more than I earn.	1	2	3	4
26	I often have irrelevant thoughts.	1	2	3	4
27	I am more interested in the present than the future.	1	2	3	4
28	I am restless at the theatre or lectures.	1	2	3	4
29	I like puzzles.	1	2	3	4
30	I am future oriented.	1	2	3	4

Please read each statement and answer how strongly you agree or disagree with the statement. **Encircle** the appropriate box on the right side of this page.

1= Strongly Disagree
2= Disagree
3= Neutral
4= Agree

1	In uncertain times, I usually expect the best.	1	2	3	4	5
2	It's easy for me to relax.	1	2	3	4	5
3	If something can go wrong, it will go wrong.	1	2	3	4	5
4	I'm always optimistic about my future.	1	2	3	4	5
5	I enjoy being with my friends a lot.	1	2	3	4	5
6	It's important for me to keep busy.	1	2	3	4	5
7	I hardly ever expect things to go my way.	1	2	3	4	5
8	I don't get upset too easily.	1	2	3	4	5
9	I rarely count on good things happening to me.	1	2	3	4	5
10	OVERALL I expect more good things to happen to me than bad.	1	2	3	4	5
11	I rather like doing something new or different than always doing the same things.	1	2	3	4	5
12	I like having change and making novel experiences in everyday life.	1	2	3	4	5
13	I prefer to lead a life that facilitates change, variety, and travel even if I have to meet unexpected situations.	1	2	3	4	5
14	I always seek new ideas and experiences.	1	2	3	4	5
15	It is appealing to me to do something different always.	1	2	3	4	5
16	When things get boring, I try out new things.	1	2	3	4	5
17	I prefer a steady way of life compared to an unpredictable way of life with lots of change.	1	2	3	4	5
18	Most people who are important to me think I should gamble in a casino.	1	2	3	4	5
19	Most people in my life whose opinions I value would approve of me gambling in a casino.	1	2	3	4	5

Please read each question and answer how characteristic or true is this of you. **Encircle** the appropriate box on the right side of this page.

In the last 12 months how often have you:

		Never	Some times	Most of the time	Almost always
1	Bet more than you could really afford to lose?	0	1	2	3
2	Needed to gamble with larger amounts of money to get a feeling of excitement?	0	1	2	3
3	Gone back another day to try and win back the money you lost?	0	1	2	3
4	Borrowed money or sold anything to get money to gamble?	0	1	2	3
5	Felt that you might have a problem with gambling?	0	1	2	3
6	Felt that gambling has caused you health problems, including stress and anxiety?	0	1	2	3
7	People criticized your betting or told you that you have a gambling problem? (whether or not you agree with their opinion)	0	1	2	3
8	Felt that your gambling has caused financial problems for you or your household?	0	1	2	3
9	Felt guilty about the way you gamble or what happens when you gamble?	0	1	2	3

1. Age: _____ Years
2. Gender: 1.Male 2. Female
3. Marital Status: 1. Single 2. Married
4. Educational Qualification: 1. Below HSC 2. HSC 4. Graduation 5. Post Graduation
5. Occupation: 1. Service 2. Business

THANK YOU

APPENDIX B

RESEARCH PUBLICATIONS

Thomson, A. R., & Mekoth, N. (2020). The Relationship between Optimism and Gambling Intensity: Empirical Evidences. *Studies in Indian Place Names*, *40*(50), 3875-3882.

Thomson, A. R., & Mekoth, N. (2020). Customer Segment Analysis for Casino Strategy: Differentiation Based on Value and Volume with Implications for Scale. *MIRROR, 9* (2). ISSN: 2249-8117.

PAPERS PRESENTED

Presented paper, "The Relationship between Self- Esteem and Gambling Motivation: A Study among Casino Customers" at the International Conference on 30th October, 2018 organised by Devchand College, Kagal, Kolhapur.

Presented paper, "Role of Casinos in Tourism" and won best paper award at the International Conference on Multidisciplinary Research and Global Innovation in Social Sciences, Management, Business, Education, Tourism and Technology, on 24th November, 2019 organised by Research Development Association.

Presented paper, " Gamblers and Risk: The Role of Risk Propensity in Gambling" at one day International Conference on Sustainable Growth in Commerce, Management and Social Sciences, on 17th December, 2019 organised by Dhananjayrao Gadgil College of Commerce, Satara.