

Investigation of the Role of Poker on Poker Players Mental and Physical Health

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Identifying the Problem

Roughly two million (one percent) of the entire population in the United States are pathological gamblers, while an additional four to six million (two to three percent) are considered problem gamblers (Frazier, n.d.). Problem gambling is defined as gambling behavior which causes disruptions in any major area of life: psychological, physical, social or vocational; pathological gambling is a more severe form of problem gambling (Frazier, n.d.). One of the most popular forms of gambling is poker. As one of the more popular forms of gambling in the world, it is important to understand the mental and physiological effects of the game on the players. Beyond issues involving gambling addictions, which have been correlated with an increase in suicide rates, research has been performed that connects poker with other mental disorders such as bipolar and attention deficit hyperactivity disorders (ADHD) (Ballon, 2005; Karlsson & Håkansson, 2018). Additionally, it is important to understand the physical toll that the game has on these players as poker is often conducive to unhealthy lifestyles. Contributing factors include the sedentary lifestyle and high-stress environment, but also the atmospheres cultivated by casinos and poker cardrooms that are conducive to alcohol consumption and tobacco smoking (Mcgrath & Barrett, 2009; Molinaro et al., 2018). In order to better analyze these various problems and health risks, Ulrich Beck's theory of risk analysis is utilized, below (Beck, 2000). Within this framework, the casinos and cardrooms are considered to be physical artifacts, while the game of poker itself is analyzed as a non-physical artifact.

Methods

The subsequent research answers the following research question: How does the environment cultivated by casinos and cardrooms contribute to the mental and physical effects of poker on the players? In the following analysis, to fully understand and form an answer to the

research question ethnography, discourse analysis, and documentary research methods are utilized. Ethnography and discourse analysis are first used in the study of YouTube vlogs (video blogs) from Daniel Negreanu, Brad Owen, and Andrew Neeme. Negreanu, a two-time World Series of Poker (WSOP) Player of the Year and 2014 WSOP Hall of Fame inductee, is regarded as one of the best and most famous poker players in the world (Willis, 2014). Each summer he documents his experiences playing poker tournaments at the WSOP in Las Vegas for his roughly 384,000 YouTube subscribers (as of February 19th, 2020) to view (Negreanu, n.d.). Owen and Neeme, however, are lesser known players (183,000 and 136,000 subscribers, as of February 19th, 2020, respectively) who both post their experiences playing low and mid-tier cash games (Neeme, n.d.; Owen, n.d.). Each of these vlogs provide insight into the mental struggles of playing poker for long hours and how the players attempt to deal with these struggles. In addition, while less commonly discussed, the players detail additional physical health issues that result from playing.

This data is analyzed in conjunction with the information gathered using discourse analysis and documentary research methods. Information from the review and research articles provide a background for the health issues that arise due to poker. Specifically, combinations of keywords such as poker, mental health, gambling addiction, stress, depression, alcohol, and drugs, among others, were used when searching medical and psychology academic journals. Examples of medical journals utilized include the *American Journal of Epidemiology* and *Current Biology*. Examples of psychology journals used include *Cyberpsychology, Behavior, and Social Networking*, the *Journal of Behavioral Addictions*, and the *Journal of Gambling Behavior*. Additionally, the reference sections of specific papers were targeted in order to identify other potentially relevant articles and/or journals. Discourse analysis and documentary research methods

aid in answering the research question by determining the role casinos and cardrooms play in facilitating these health risks.

Background

The period of 2003 to 2006 in the poker community is commonly referred to as the poker boom. After the release of the movie *Rounders* and the introduction of online poker, a few years prior, the popularity of poker skyrocketed (Vamplew, 2016). The number of 2006 WSOP Main Event tournament entrants were more than 14 times greater than the size of the field in the 2002 event (*Tournament results*, 2019). However, in 2006 the United States government passed the Unlawful Internet Gambling Enforcement Act of 2006 (UIGEA) (Vamplew, 2016). This began the decline in popularity as many large online poker sites were forced to leave the United States. The one's who did not, including Full Tilt Poker and PokerStars, were indicted for fraud on April 15, 2011 – what has commonly become known as “Black Friday” in the poker community – and had their domains shut down (Vamplew, 2016).

Fast forward to modern day and poker popularity is back on the rise. On May 14, 2018 the United States Supreme Court ruled the Professional and Amateur Sports Protection Act (PASPA) unconstitutional (Perez, 2018). This ruling allowed for states to implement and regulate sports gambling at the state level and in turn opened the door for the return of online poker as well (Fisk, 2019; Perez, 2018). Currently four states (Delaware, Nevada, New Jersey, and Pennsylvania) have legalized and implemented online poker with many more in the process of passing state laws and/or implementing the systems (Fisk, 2019). With poker and gambling returning to the forefront of American entertainment, understanding and discussing the associated mental and physical health risks cannot be more important.

Poker, both online and live, often cultivates an environment that can be detrimental to cardiovascular, neurological, and hormonal health (Johansen-Berg & Walsh, 2011). This environment is cultivated by casinos and cardrooms where unhealthy practices such as smoking, alcohol consumption, and sedentation are prevalent; in addition to the already high-stress situations that players constantly face while playing (Mcgrath & Barrett, 2009; Molinaro et al., 2018). These factors are known to play roles in the development of prolonged hypertension which is one of the most well-known risk factors for cardiovascular disease (Greenland et al., 1999; Smith et al., 2004).

Beyond poker's direct relationship with physical health issues, poker arguably has even more profound mental health effects on players. First, poker has well-documented short-term mental effects. Playing at a high level requires constant mathematical calculations and high-stress decision-making that requires prolonged mental focus and is often mentally taxing (Tendler, n.d.). When this focus lapses and a mistake is made or if a player simply becomes unlucky, the mental effects usually compound. "Tilt" is a term that refers to the mental state of poker players after becoming frustrated with themselves and/or their opponents. This is a common occurrence for every player, novice to professional, and can lead to compounding mistakes, often resulting in players losing additional money (Browne, 1989).

Ultimately, poker is a form of gambling and stimulates players brains similarly to alcohol and other drugs, which can often results in compulsive gambling (Jabr, 2013). Only roughly 10-15% of poker players are estimated to make money from playing meaning that at least 85% of players lose money (sometimes large amounts) (Little, 2016). Gambling addictions are often fueled by financial loss and the urge to recoup losses and/or "get rich quick." In many cases, this leads gamblers to become mentally and financially unstable. Anxiety and depression are common

mental illnesses associated with gambling addiction (Barrault & Varescon, 2013). Additional conditions, such as bipolar disorder and ADHD, have also been seen to be elevated in populations of gambling addiction patients (Ballon, 2005). However, most significantly, gambling addiction has been correlated with higher suicide rates, heightening the importance of the study of these issues (Karlsson & Håkansson, 2018).

STS Framework

To provide a framework for analyzing the information gathered through the ethnography, discourse analysis and documentary research methods, Ulrich Beck's theory of risk analysis is employed. In 2000, Beck, a famous German sociologist, published *Risk Society Revisited: Theory, Politics, and Research Programmes*, in which he revised his previous work and outlined the use of both physical and non-physical artifacts to assess risk (Beck, 2000). Another famous sociologist, Anthony Giddens, from the United Kingdom, has produced many works in agreement with Beck; sharing a similar view in support of Beck's risk society (Ekberg, 2007). A risk society, as defined by Beck, is "a systematic way of dealing with hazards and insecurities induced and introduced by modernization itself" (Beck, 1992).

While Beck has received support from Giddens among others, his risk analysis theory has also been subject to criticism. The theory has been criticized for insufficiently analyzing the distribution of risk between social and geographic regions (Ormrod, 2013). This criticism is noted and addressed in the analysis of the research question as there is an unequal distribution of risk among poker players of different social classes. Players with a disposable income do not face the same pressures and risks as players who are playing as their main source of income. Beck has also been critiqued for his view of risk society "as riddled with risks of which we can have neither knowledge or measure" (Aradau & Van Munster, 2007). It is important that this assessment is

addressed when it comes to poker as risks are often quantifiable. While it may not be readily apparent to new or novice poker players, every decision made can be quantified using probability and, therefore, the risks can be assessed (Hanks, n.d.). However, while risk is often measurable at the poker table, the mental and physical toles on a player are not as easily quantified and are important to consider when evaluating the relevant research.

Results and Discussion

As a result of this research, the environments cultivated by both online and in-person casinos do have detrimental effects on the health of poker players. In total, eighteen risk criteria are identified; nine mental health risks, and nine physical health risks. However, while all criteria are quantified, only two from each category are analyzed in depth, with other relating risks incorporated. Both online and live casinos have more extreme physical effects than mental effects (two to one). However, overall, there are more high-risk mental effects found in both. In addition, live poker has more extreme risks (three to one), while online has more moderate and high risks (seventeen to thirteen). Finally, live poker has more low risks, with two, compared to online poker, with zero.

In order to arrive at these conclusions, Beck's risk analysis method has been utilized. Specifically, the analysis method of risk matrices has been used as a method of visualizing and quantifying the level of risk of the unique factors considered. A risk matrix is an analysis method that scores "exposure and effect endpoints" and aggregates the risk factors in a risk ranking matrix. This matrix contains the effect on one axis and the exposure on the other (Van der Fels-Klerx et al., 2018). In this case, the likelihood of a risk occurring is placed on one axis, with the consequences of the risks on the other axis. Potential risk factors of poker are identified using the research methods outlined above. Then, each factor is assigned a grade for the probability of

occurrence and the severity of the risk, for both internet and non-internet casinos/gambling. For likelihood, risks are classified as either rare, unlikely, possible, likely, or almost certain. For consequences, risks are classified as either insignificant, minor, moderate, major, or severe. A table containing the risk criteria and associated likelihood and consequence grades is provided in Appendix A. Based on location in the matrix, risks are designated to be extreme (red), high (orange), moderate (yellow), or low (green). The live casino risk matrix resulted in the identification of three extreme (two physical health, one mental health), six high (one physical health, six mental health), seven moderate (four physical health, three mental health), and two low (two physical, zero mental) risks (Figure 1). The online casino risk matrix resulted in the identification of one extreme (one physical health, zero mental health), eleven high (five physical health, six mental health), six moderate (three physical health, three mental health), and zero low risks (Figure 2).

Physical Health Risks

Physical health is defined as “the condition of your body, taking into consideration everything from the absence of disease to fitness level” (*Physical health—EUPATI*, 2015). Physical and mental health are closely associated and directly affect each other. Therefore, many of the health risks identified, including alcohol consumption, smoking, and, sleep deprivation, can often affect aspects of both mental and physical health. However, for the purposes of this paper and the use of Beck’s risk analysis framework, each factor is classified as either a physical or mental health risk; based on which category the risk is determined to affect more. The nine physical health risks of poker are alcohol consumption, smoking, recreational drugs, an unhealthy diet, sedentation, sleep deprivation, eye strain, carpal tunnel syndrome, and computer vision syndrome

(Appendix A). Of these risks, alcohol consumption and smoking will be the main focus of analysis, with other relating factors incorporated.

Figure 1.

Live Casino Poker – Risk Matrix

Likelihood	Consequences				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain		<u>6</u>	9		
Likely			4, <u>7</u>	2	
Possible			1, <u>5</u> , 10, <u>18</u>		<u>8</u>
Unlikely		15	16	<u>11</u> , <u>13</u>	<u>12</u>
Rare	17			3	<u>14</u>

Note. Shaded regions correspond to extreme (red), high (orange), moderate (yellow), and low (green) risks. Risks Key: 1) Alcohol, 2) Smoking, 3) Recreational drugs, 4) Unhealthy diet, 5) Mental focus drugs, 6) Mental stress, 7) Small financial stress/pressure, 8) Large financial stress/pressure, 9) Sedentation, 10) Sleep deprivation, 11) Gambling addiction, 12) Depression, 13) Other mental conditions (e.g. bipolar disorder, ADHD, etc.), 14) Suicidal thoughts/actions, 15) Eye strain, 16) Carpal tunnel syndrome, 17) Computer vision syndrome, 18) Changes in mood.

Figure 2.

Online Poker – Risk Matrix

Likelihood	Consequences				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain		<u>6</u>	9		
Likely		15	1, <u>7</u>, 10		
Possible		17	4, <u>5</u>, <u>18</u>	2, <u>11</u>	
Unlikely			16	3, <u>13</u>	<u>8</u>, <u>12</u>
Rare					<u>14</u>

Note. Shaded regions correspond to extreme (red), high (orange), moderate (yellow), and low (green) risks. Risks Key: 1) Alcohol, 2) Smoking, 3) Recreational drugs, 4) Unhealthy diet, 5) Mental focus drugs, 6) Mental stress, 7) Small financial stress/pressure, 8) Large financial stress/pressure, 9) Sedentation, 10) Sleep deprivation, 11) Gambling addiction, 12) Depression, 13) Other mental conditions (e.g. bipolar disorder, ADHD, etc.), 14) Suicidal thoughts/actions, 15) Eye strain, 16) Carpal tunnel syndrome, 17) Computer vision syndrome, 18) Changes in mood.

Alcohol Consumption

Utilizing the risk matrix analysis, alcohol consumption is determined to be a moderate risk for live poker and a high risk for online poker (Figures 1 and 2). In both cases, alcohol is determined to have a moderate severity (although the severity can obviously increase in extreme cases; alcoholism), however, for likelihood, alcohol is graded as possible for live poker and likely for online poker. Initially, this is seemingly counterintuitive. Both Andrew Neeme and Brad Owen

have shown that at their “Meet Up Game” events – casual poker cash games hosted by the two at casinos across the country and open to the public – drinking is a common occurrence, both while playing and at the end of the night, at the conclusion of the events (Neeme, 2019, 2020; Owen, 2019, 2020b). However, a 2007 United Kingdom survey of poker players found that internet players are significantly more likely to drink heavily than non-internet players. Additionally, in a 2010 study, a sample of Canadian players found that a majority of online players reported drinking alcohol while playing, compared to a minority of live players (Gainsbury, 2012). Finally, the widespread physical health effects of high alcohol consumption are well documented. These effects include cardiovascular diseases (hypertension, cardiomyopathy, and arrhythmias), liver damage, and connections to head and neck, esophageal, liver, breast, and colorectal cancers (*Alcohol’s effects on the body*, 2011; Fong, 2005).

Cigarette Smoking

Smoking is found to be an extreme risk in live and a high risk in online poker settings (Figures 1 and 2). In both cases, the severity of smoking is determined to be major. The determination is made based on the large amount of scientific evidence surrounding the negative health effects. Cigarette smoking is the leading preventable cause of death in the United States, resulting in more than 480,000 (nearly one in every five) deaths each year, 41,000 of which are as a result of secondhand smoke. This is more deaths than the annual death tolls from human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle accidents, and firearm-related incidents combined (*Health effects of cigarette smoking*, 2019).

Smoking is scored as likely in live poker and possible in online poker because of the established prevalence of smoking in each environment. In the same 2007 United Kingdom survey, smoking is associated with both internet and non-internet gambling. However, it is determined to

be significantly higher (seventy-three percent) in the non-internet population compared to the internet population (sixty-four percent) (Gainsbury, 2012). During Daniel Negreanu's 2019 World Series of Poker Europe experience, he constantly detailed the struggles of playing and living in a smoking-abundant casino (Negreanu, 2019a, 2019c, 2019d, 2019e). While the casino is supposed to only allow smoking on specific floors and not in the area of play, Negreanu, who is placed on a non-smoking floor, exhibited his frustrations as the rules are constantly broken and loosely enforced. It is so difficult for himself and his wife, who is staying with him, that affected their ability to sleep and required them to move rooms twice (Negreanu, 2019a, 2019d). For his wife, the smoke is too much and she returned home to the United States after only three days. In the following weeks, Negreanu continued to display his frustrations (often through "bleeped out" expletives) with the play environment, as it is affecting both his mental and physical health as well as his poker play (Negreanu, 2019b, p. 3, 2019e). Even as a non-smoker, as demonstrated above, secondhand smoke has equal detrimental health effects and the casino environments put non-smokers in equal danger of experiencing these effects.

Mental Health Risks

The World Health Organization (WHO) defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (Galderisi et al., 2015). Therefore, mental health risks are those which effect one's well-being and/or ability to cope with normal life stresses. In the context of casinos and poker, the nine potential mental health risks identified are mental focus drugs (caffeine, energy drinks, Valium, etc.), mental stress, small financial pressure, large financial pressure, gambling addiction, depression, other mental conditions (bipolar disorder, ADHD, etc.), suicidal thoughts/actions, and

mood changes (Appendix A). Of these nine risks, mental stress and gambling addiction will be the main focus of analysis.

Mental Stress

Mental stress is defined as “a form of stress that occurs because of how events in one’s external and internal environment are perceived, resulting in the psychological experience of distress and anxiety” (Lazarus & Folkman, 1984). As it pertains to poker, mental stress is classified as almost certain, for likelihood, and minor, for severity, making it a major risk, for both live and online poker. In poker, mental stress is constant. Even when “running hot” or playing well, there are always decisions and mathematical calculations to make, which over long periods of time is mentally taxing and stressful. Since the general stress state of poker players is minor, this category for severity is chosen. However, mental stress is often heightened by bad poker strategy and/or unlucky streaks, as well as many of the other risk factors identified, such as sleep deprivation, small/large financial losses, alcohol, and smoking. In turn, stress is also an effector of many of the same risk factors; a self-fulfilling cycle.

All three of Neeme, Owen, and Negreanu have documented the stresses that they face at various points, with Owen and Negreanu providing significant detail. Owen released a video in which he reviewed his play and winnings from his 700 hours of playing poker cash games during 2019. In this video, he details his winnings in each month and the biggest “downswing” (period of time in which a player loses more than expected, due to being unlucky and/or poor play) of his entire life (Owen, 2020a). In August 2019, in the middle of this downswing, he lost \$12,000; his worst month of his life. He goes on to state, “I was running really poorly (meaning he was getting unluckier than expected) and, then, after a long time of running bad, it gets in your head. You start playing bad, you make poor decisions, that’s certainly the case with me. I was trying to force things

and it just wasn't working out" (Owen, 2020a). Owen shows how the stresses of poker can affect players mental state, sending them spiraling into further stress.

For Negreanu, the WSOPE was a few very stressful weeks. Beyond the mental stresses of having to deal with the smoking in the casino, as mentioned above, which he admitted had already affected his play, he was in the running for World Series of Poker Player of the Year (WSOP POY) (Negreanu, 2019d, 2019e). As the only player to ever win two WSOP POY titles, Negreanu's personal goal is to win three, before another player wins a second. Therefore, Negreanu placed additional pressure on himself in order to be competitive, and was required to play more tournaments than he normally would, as a result (Negreanu, 2019d). Three weeks into the WSOPE, with only a few days and two tournaments remaining, Negreanu posted a blog titled "We have reached Stress Level 5000! – 2019 WSOPE VLOG DAY 21" (Negreanu, 2019f). In this blog, Negreanu states, "Yeah, you know, I'm stressed out a little bit... I really don't want to have to play the other heat (another tournament) tonight, because I'm tired and it's going to go until four in the morning." After entering and being eliminated from said tournament, Negreanu continues, "This is so f*cking annoying. It's so f*cking tilting (a poker term for frustrating). This whole thing has been. Everything bothers me at like an 11, because I'm so stressed" (Negreanu, 2019f). These excerpts show the stress that even the best players in the entire world experience on a regular basis and demonstrates the mental effects that poker can have on players.

Gambling Addiction

A person suffering from gambling addiction, also known as a compulsive or pathological gambler, is someone who is "unable to resist his or her impulses" and the "urge to gamble becomes so great that tension can only be relieved by gambling more and more" (*Gambling disorder (compulsive gambling, pathological gambling)*, n.d.). The risk level, after analysis, is determined

to be high for both online and live casinos. However, the risk in online casinos is found to be closer to an extreme risk than in live casinos because the probability of gambling addictions is classified as possible and unlikely, respectively. This is supported by the literature as two studies found the convenience and availability of online poker may foster a faster onset of addiction (Barrault & Varescon, 2016). Additionally, a 2002 study found that online gambling generally creates more severe gambling problems than live gambling. Finally, a 2009 study determined the prevalence of problem gambling, in the online population, to be twenty-three percent (Barrault & Varescon, 2016).

The effects of gambling addictions are significant and, therefore, the severity of the risk is classified as major. Studies have found that pathological gamblers exhibit significantly higher levels of depression and anxiety than non-pathological gamblers (Barrault & Varescon, 2013; *Compulsive gambling symptoms, causes and effects*, 2020). In addition, research has connected poker and gambling addictions to other mental health conditions, including bipolar disorder and ADHD (Ballon, 2005). As a result, gambling addictions has been correlated with increased suicide rates, as well (Karlsson & Håkansson, 2018). However, it is important to mention that compulsive gambling, like other addictions, is treatable through therapy and support groups; as well as through medication, such as antidepressants, mood stabilizers, opioid antagonists, and narcotic antagonists (*Gambling disorder (compulsive gambling, pathological gambling)*, n.d.).

Limitations

While this research is able to draw conclusions about the different risks of poker and provide valuable information to poker players, the paper is limited by the amount of poker-specific research in the literature, the amount of time allowed to research and analyze the topic, and the fact that the paper mainly focused on negative effects. Based on the limited information on the

mental and physical health effects of poker, specifically, the conclusions that are drawn often require extrapolation and connections to be made between poker and gambling as a whole. While poker is a form of gambling and the majority of the effects noted are the same or similar, between the two, conclusions cannot be made definitively. In addition, of the research available and analyzed, not all resources are from the same demographics. For example, the ethnographic research from Daniel Negreanu's videos mainly took place during the 2019 WSOPE in Rozvadov, Czech Republic; a much different environment than the United States or even other locations in Europe. Negreanu even noted that there were many differences, himself (Negreanu, 2019b). Therefore, some assumptions are required when scoring some risk factors, due to the limited available research. Some risk factors are emphasized more in literature, but for those that are not, there is limited evidence/statistics to utilize when drawing conclusions. This also means that important risks may not have been considered as there may not have been current literature concerning them and/or this literature is not found.

The second limitation of this research paper is the amount of time allotted to complete the research, analyze the information and form an answer to the research question, and write the report outlining the analysis. The process began in September 2019, with research continuing throughout the Fall and into the Spring. The paper itself is only allotted approximately eight weeks to be completed. With additional time and resources, additional information and research methods could have been utilized to support the conclusions and analysis.

Finally, it is important to note that this research paper focused heavily on the detrimental effects of playing poker, in both online and live settings. While the purpose of the paper is to identify and quantify potential risks, it is important to mention that there are benefits to playing that are not largely discussed. Some of these benefits include, entertainment, money (for those players who

are profitable), and ease of access, for online players who may have health conditions that prevent them from being about to play in live settings – one study found that 12.3% of online gamblers described themselves as “disabled” (Gainsbury, 2012). Additional benefits included improved mental acuity, emotional control, and observation skills (*How playing poker re-wires your brain for the better*, 2019; Laakasuo et al., 2014; St. Germain & Tenenbaum, 2011). These benefits may not outweigh the risks, discussed above; however, it is important to consider when weighing the costs/benefits of playing poker.

Future work

Since there is currently limited research into the health effects of poker, specifically, this should be the focus of future exploration. One study of interest would be to track the health of a large population of both online and live poker players over a three- to five-year period. An additional area of interest would be tracking subsets of the larger populations that are divided based upon the average number of hours of poker played each week. Such subsets could include groups of players that spend zero to ten, ten to twenty-five, twenty-five to forty, and forty or more hours per week. Analysis of these subsets would strengthen the validity of the conclusions that can be made because the research would be able to compare the magnitude of health changes to the amount of poker a person plays. In addition, Beck’s risk analysis framework could be further utilized to create solutions for dealing with these hazards, in order to mitigate and/or alleviate the mental and physical health risks. Finally, another topic of interest would be further investigating the benefits of playing poker, as opposed to focusing on the negatives. This research could be supported by a cost-benefit analysis framework, in which the risks are weighed against the benefits, in addition to or in place of risk analysis. If provided sufficient time and resources, these research topics would be of interest to me and one’s that I would consider pursuing. However,

additional groups that could explore these topics include any biomedical, psychology, or gambling-related researchers that publish to academic journals of the same fields.

Conclusion

As a result of this research, mental and physical health risk factors are identified in the environments of live and online casinos, in the context of poker. These risks are then quantified using risk analysis and risk matrices in order to demonstrate the potential detrimental effects of playing poker. As mentioned at the beginning of this paper, it is estimated that there are over twenty-two million people who play poker for money worldwide, as of 2010. This number is only expected to grow in the coming years as sports gambling and online poker become legalized in more and more states across the country. Therefore, the conclusions made and risks identified provides valuable information to a large global population of stakeholders; not simply the poker players, but also their friends and families, as well as the casinos and cardrooms. It is not the objective of this paper and this research to cause people to avoid playing poker entirely or less frequently. However, the hope is that the paper provided valuable information about key mental and physical health risks of which players should be cognizant while playing poker.

Appendix

Appendix A.

Poker Risks Classifications Table

ID	Risks	Mental/Physical	Live (In-person)		Online	
			Probability	Severity	Probability	Severity
1	Alcohol	Physical	Possible	Moderate	Likely	Moderate
2	Smoking	Physical	Likely	Major	Possible	Major
3	Recreational Drugs	Physical	Rare	Major	Unlikely	Major
4	Unhealthy Diet	Physical	Likely	Moderate	Possible	Moderate
5	Mental Focus Drugs	Mental	Possible	Moderate	Possible	Moderate
6	Mental Stress/Focus	Mental	Almost certain	Minor	Almost certain	Minor
7	Small Financial Stress/Pressure	Mental	Likely	Moderate	Likely	Moderate
8	Large Financial Stress/Pressure	Mental	Possible	Severe	Unlikely	Severe
9	Sedentation	Physical	Almost certain	Moderate	Almost certain	Moderate
10	Sleep Deprivation	Physical	Possible	Moderate	Likely	Moderate
11	Gambling Addiction	Mental	Unlikely	Major	Possible	Major
12	Depression	Mental	Unlikely	Severe	Unlikely	Severe
13	Other mental conditions (biopolar, ADHD, etc.)	Mental	Unlikely	Major	Unlikely	Major
14	Suicidal Thoughts/Actions	Mental	Rare	Severe	Rare	Severe
15	Eye Strain	Physical	Unlikely	Minor	Likely	Minor
16	Carpal Tunnel Syndrome	Physical	Unlikely	Moderate	Unlikely	Moderate
17	Computer Vision Syndrome	Physical	Rare	Minor	Possible	Minor
18	Changes in mood	Mental	Possible	Moderate	Possible	Moderate

Note. Risks were classified into the categories in which they best fit. Many risks may affect both mental and physical health, however, the one that fit the best was chosen. The same can be said about the probability of a risk occurring and the severity of the risk, as some risks can increase/decrease in probability or severity depending on the circumstances.

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