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What Characterizes Excessive Online Stock Trading? A Qualitative Study

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Abstract

Excessive online stock trading appears to share similarities with gambling disorder. However, using gambling disorder criteria to assess excessive trading may not allow a full understanding of this phenomenon as specific aspects of the trading context that differ from gambling may be overlooked. This study explores the manifestations and consequences of excessive trading and its links with gambling disorder via the perceptions of online stock traders themselves. Data for thematic analysis were collected from a sample of online stock traders (N = 13) divided into two focus groups based on trading frequency (i.e., on a regular or occasional basis). Perceived manifestations of excessive trading included excessive preoccupation and frequent behaviors, and consequences that affect finances, relationships, work and health. Perceived links between gambling disorder and excessive trading concerned a shared incapacity to control behaviors, and chasing losses. Though excessive trading and gambling disorder are similar on many grounds, the assessment of trading behaviors should consider specific aspects such as the context within which they occur (e.g., state of the market). Implications for future research on excessive trading behaviors are discussed.

Keywords: stock market trading, online gambling, gambling disorder, gambling behavior

Résumé

Les transactions d'actions excessives peuvent présenter des similitudes avec le jeu pathologique. Cependant, appliquer des critères propres au jeu pathologique à des pratiques de transactions excessives en ligne ne permet pas nécessairement de bien comprendre ce phénomène, car il pourrait arriver qu'on néglige certains aspects particuliers du contexte transactionnel qui diffèrent du contexte du jeu. Cette étude explore les manifestations et les conséquences de pratiques transactionnelles excessives

et ses liens avec le jeu pathologique, en se penchant sur les perceptions personnelles des négociateurs. Les données ont été recueillies pour une analyse thématique à partir d'un échantillon de négociateurs en ligne (N = 13), divisé en deux groupes de discussion en fonction de la fréquence des transactions (soit sur une base régulière ou occasionnelle). Parmi les manifestations perçues à propos de transactions excessives, on a pu voir des préoccupations excessives et de fréquents comportements et leurs conséquences sur les finances, les relations, le travail et la santé. Les liens communs perçus entre les troubles du jeu et la négociation excessive étaient l'incapacité à contrôler ses comportements et la récupération des pertes. Bien que la négociation excessive et les problèmes du jeu soient semblables sous divers aspects, l'évaluation de comportements de négociateurs devrait prendre en compte des aspects particuliers tels que le contexte dans lequel ces comportements se manifestent (par exemple, l'état du marché). Dans l'étude, on aborde aussi la portée de futures recherches sur les comportements de négociation excessive.

Introduction

Gambling is a form of entertainment that involves taking a risk with money. All types of gambling are characterized by an irreversible bet where chance determines the outcome in part or in whole, resulting in a win or a loss (Ladouceur, Sylvain, Boutin, & Doucet, 2002). These characteristics can also be applied to stock market trading, where transactions involve fees and the market can shift in favor or disfavor of an investor's financial interests. A short-term timeframe makes returns practically impossible to predict, thus making it akin to gambling (Chordia, Roll, & Subrahmanyam, 2005).

Gambling behaviors on the stock market have been surveyed over the past decade in prevalence studies in Canada (e.g., Kairouz & Nadeau, 2014; R. A. Malatest & Associates, 2014; Wood & Williams, 2009) and the United States (e.g., Engwall, Hunter, & Steinberg, 2004; Shapira, Ferguson, Frost-Pineda, & Gold, 2002). Stock trading has become increasingly popular since the advent of the Internet. Bogan (2008) reports that the use of computers in 2002 had a larger impact on stock holding rates in households that did not possess any stock versus those that did in 1992. Online banking and stock exchanging via mobile devices almost doubled between 2008 and 2009 (ComScore, 2009), and stock trading was among the fastest-growing categories of Internet content to be accessed by browser, with the audience of such sites increasing from 3.12 to 4.82 million between 2009 and 2010 (i.e., 50% change) (ComScore, 2010). Online trading offers benefits that may spark investors' interest. It allows for increased and direct accessibility to the market, which in return contributes to reduced transaction times and costs (Barber & Odean, 2002). However, these benefits may also make it easier for individual investors to trade in an excessive manner. In Canada, 1.4% of the population reported practicing online day trading

between 2006 and 2007, and 6.3% within this group also reported having gambling problems (Wood & Williams, 2009).

Gambling has been studied as a motivation to trade for investors. For example, Bauer, Cosemans and Eichholtz (2009) illustrate how option trading appears to be motivated by gambling. Options are volatile products insofar as they involve an attempt at estimating the value of a title in the hope of purchasing/selling it to make a profit; they are not based on the true value of a title, but rather on a projected value. Bauer et al. (2009) add that positive skewness of gains with options is an element that seems to attract certain traders. Their sample was composed of individuals who traded options (n = 26,266) and individuals who traded less volatile titles (equity traders; n = 41,880). The negative performance of option traders did not seem to influence them to trade less or differently whereas equity traders appeared to adjust their strategies after experiencing losses in order to minimize them in future trades. This finding suggests that option traders were not solely motivated by financial gain, but possibly also by the thrill inherent to risk-taking in gambling. Moreover, Markiewicz and Weber (2013) assessed the nature of risk-taking in gambling and investing with a sample consisting mostly of young male university students (N = 633). Their study shows that a high gambling propensity as measured by a subscale of the Domain Specific Risk Taking scale (DOSPERT) (Weber, Blais, & Betz, 2002), a measure for risk-taking in five domains (financial decisions including gambling and investing, health/safety, recreational, ethical and social decisions), predicts trading volume and participation in day trading. This result is interesting given that the gambling and investing scales of the instrument did not correlate; the motives for practicing gambling and investing were found to be different. Indeed, instrumental risk-taking was the motive for investing (i.e., taking a risk to produce a result, such as a financial gain), while sensation-seeking was the motive for gambling (i.e., the risk-taking behavior is the end in itself). Since the investing and gambling subscales did not correlate despite gambling being a predictor of high-volume trading, it is possible that gambling and investing were considered as two fundamentally different activities as measured by the DOSPERT. However, excessive trading may be a phenomenon that overlaps both gambling and investing domains, where both share certain similarities, but also have differences that make excessive trading a distinctive form of gambling problem.

When gambling behaviors become excessive, they become the source of clinical concern. Gambling disorder is listed under the addictive disorders category in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association [APA], 2013). Chasing losses is recognized as the pivotal criterion of gambling disorder, where the individual continues to wager in the hope of reclaiming the money lost in previous unsuccessful bets. In this vein, Lister, Nower, and Wohl (2016) show that higher problem gambling severity and gambling goals predict chasing behavior in slot machine gamblers. They add that individuals who gamble in a goal-oriented manner may show more difficulty setting limits for their gambling behaviors, which in turn may lead to chasing losses. Troubles with limit-setting may be explained by a deficit in self-regulation that is typically observed

in problem gamblers (Bergen, Newby-Clark, and Brown, 2012). Other behaviors observed in gambling disorder include efforts to regulate mood and sensation-seeking through gambling, and difficulty regulating thoughts and behaviors relative to gambling. Consequences of gambling problems may be of relational (e.g., family dysfunction), psychological (e.g., alcohol and drug use, psychiatric conditions such as anxiety and depression, suicidal ideation and attempts), professional (e.g., loss of employment) and/or financial nature (e.g., bankruptcy because of betting; Shaffer & Korn, 2002).

Case studies have been carried out to explore the manifestations of excessive trading as a form of gambling problem on the stock market, and how it relates to gambling disorder. The case study of David recounts the story of a recovering excessive trader (Turner, 2011). At first, David's investments were small and conservative, but after gaining considerable financial return, his transactions began escalating into riskier ones. He would borrow money to continue his trading activities after experiencing financial losses. He would also attempt to "average down" losses, which consists in continuously buying falling shares, thus lowering the average purchase price, in the hope of a reversal. This behavior resembles chasing losses, which is typical in gambling disorder. At one point in his story, David compares his excessive trading to gambling on slot machines: "akin with a slot machine player mentality, I could not leave the machine. I was possessed with the need to keep pumping money until payout" (p. 120). This attitude of perseveration contributed to his accumulation of hundreds of thousands of dollars in debt over the span of a decade. David also experienced several other consequences such as social isolation, shame and guilt which brought him to conceal his trading problem from his family, excessive preoccupation and screening of stock markets, and loss of productivity and employment. After revealing his trading problem to his wife and seeking treatment, David pointed out that there are strong links between excessive trading and other gambling activities, and that one does not have to play cards or the slot machines to become a problem gambler.

Grall-Bronnec et al. (2015) also conducted a series of case interviews with eight traders. These participants had consulted an outpatient clinic for a clinical or sub-clinical trading problem based on the diagnostic criteria for gambling disorder as specified in the DSM-5. To assess the trading problem, the researchers replaced the term "gambling" with "trading" in the diagnostic interview. In addition to observing most of the same manifestations mentioned in David's case (e.g., chasing losses, trading more riskily, excessive preoccupation; Turner, 2011), the participants also exhibited a tendency to lie to conceal the extent of their trading activities. They invested in risky titles such as leverage products and traded within a short-term timeframe (mostly intraday) and they were constantly checking the quotes of their holdings within a day. Interestingly, all the traders considered that they had acquired a level of expertise related to trading. However, this sense of expertise did not prevent them from incurring losses. Rather, it may have triggered a sense of heightened and unrealistic confidence in their trading predictions and strategies. This bias, known as overconfidence in the field of behavioral finance (Barber & Odean, 2002), may have

induced traders to take important risks that they erroneously perceived as well calculated. This perception ultimately cost them as their sense of confidence in their decisions impeded a thorough assessment of risk for their shares.

Granero et al. (2012) conducted one of the first empirical studies aiming to better understand the differences between the profiles of three groups of pathological gamblers, including excessive traders. Their sample of participants was screened and diagnosed with pathological gambling in accordance to the diagnostic criteria of the DSM-IV-TR (APA, 2000), which was the version in effect at the time of the study. All groups were constituted of individuals who presented at an outpatient treatment clinic and diagnosed with: (1) a primary gambling problem on the stock market (n = 18); (2) a secondary gambling problem on the stock market (n = 76); or (3) a gambling problem that was not primarily nor secondarily on the stock market (n = 1,376). Three measures were used to profile the groups: the South Oaks Gambling Screen (SOGS), the Symptom Checklist – 90 items – Revised (SCL-90-R), and the Temperament and Character Inventory – Revised (TCI-R). Although results must be interpreted carefully due to the different sample sizes for each group, the three profiles of pathological gamblers were found to be similar on psychological variables. This suggests that individuals who trade excessively share similarities with individuals who gamble excessively. Those similarities may explain why excessive trading has been evaluated with gambling disorder criteria in previous studies. However, this method of assessment may not take into account the distinctive aspects of excessive trading that set it apart from gambling disorder.

Similar questions concerning the assessment of other gambling-related issues have been addressed in research. The study of gambling disorder itself faced the same issue as it began to be studied as a form of addictive disorder. Formerly known as pathological gambling when it first appeared in the DSM-III and classified as an impulse-control disorder not otherwise specified (APA, 1980), gambling disorder appeared to share many clinical characteristics with substance addiction disorders as research progressed on the topic. However, gambling disorder is also characterized by certain manifestations that are specific and distinctive from substance use disorders, such as chasing losses. Likewise, poker players' erroneous thoughts were historically assessed with measures that were developed with gamblers who participated in gambling activities of pure chance (e.g., roulette, slot machines, etc.). This caused certain typical thoughts of poker players to be incorrectly interpreted as false, because assessment measures were not adapted to consider the specific aspect of skill inherent to the game (Brochu, Sévigny, & Giroux, 2015; Lévesque, Sévigny, Jacques, & Giroux, 2017). Thus, specific characteristics in excessive trading may be overlooked when using criteria intended to measure gambling-related behaviors that were studied in individuals who partake in gambling activities such as poker, roulette, or slot machines. Namely, underlying motivations for trading and gambling can be different (Markiewicz & Weber, 2013). Also, while gambling typically has a negative expected return over a long-term period (Ladouceur et al., 2002), stock trading is above all a method of investment; the expected return is usually positive.

Objectives

Although there is evidence that excessive trading is akin to gambling on the stock market, this evidence is mostly based on studies with methods that have applied gambling disorder criteria to assess excessive trading. Hence, the unique disorder-like features of this complex clinical phenomenon have seldom been studied. A good starting point would be to ask stock traders themselves what they consider as manifestations of excessive trading and its links to gambling disorder, which has never been attempted in previous research to our knowledge. A way to explore the perceptions of individuals in depth on a certain topic, namely concerning the manifestations of excessive trading, is through the application of a qualitative research method. Qualitative research provides rich results with respect to the personal experiences of participants. Indeed, qualitative researchers are usually more concerned with the meaning that participants attribute to an experience rather than the experience itself, with the aim of eventually establishing causal relationships between variables (Willig, 2001). In this light, the goal of the present study is to explore the perceptions of a sample of online traders concerning the manifestations and consequences of excessive trading and its links to gambling disorder. This study aims to answer the following questions:

- What signs are perceived as part of an excessive practice of stock trading?
- What consequences are perceived as resulting from an excessive practice of online stock trading?
- How do excessive trading behaviors relate to gambling disorder? How are they similar and/or different?

Method

Design

A popular means of collecting data destined to qualitative research and analysis in social sciences is the focus group (Vaughn, Schumm, & Sinagub, 1996). Focus groups constitute "a way of collecting qualitative data, which, essentially, involves engaging a small number of persons in an "informal group discussion (or discussions), 'focused' around a particular topic or set of issues" (Wilkinson, 2004, p. 177). They are especially useful in acquiring information about personal experiences, such as thoughts, perceptions, feelings and opinions (Krueger & Casey, 2014). They are often used in exploratory studies as they aid in establishing an anchor point that guides subsequent research (Vaughn et al., 1996).

Participants

In October 2012, a recruitment advertisement was sent twice by email to the community of Université Laval. The inclusion criteria were: (1) to be 18 years of age or older, (2) to have held an online stock trading account over the course of the last 12 months, (3) to have traded stock online at least once from their personal account

(purchase or sale) over the last 12 months, and (d) to accept to participate in a two-hour audio-recorded focus group discussion. Out of 26 persons who responded to the advertisement, 20 were admissible. After considering personal schedules and availabilities for their attendance, the final sample included 13 participants who were divided into two groups based on trading frequency: one group traded stock online occasionally (i.e., less than once a week; $n = 7$), and the other traded regularly (i.e., at least once a week or more; $n = 6$). The size of each group was considered ideal as per guidelines in the field (see Krueger & Casey, 2014). Grouping participants based on transaction frequency ensured that participants would be among traders with similar habits to theirs, which would facilitate self-expression and, if they desired, the disclosure of personal experiences without fearing judgement from participants with strongly different habits. Participants in the first group were mostly men (5 out of 6), while the second group was entirely constituted of men. The mean age of the participants was 38 years old, ranging between 19 and 71.

Instruments

Telephone screening interview. The initial telephone contact with participants aimed to explain the study and screen their admissibility, and gather information concerning age and gender.

Moderator's guide. The focus group moderator's guide included two sections with a total of 12 questions that aimed to explore online investors' perceptions and opinions about the manifestations of excessive trading as well as their links with gambling disorder. Participants were asked whether they thought it is possible to develop a problem or an addiction to trading and, if so, what signs and consequences would be indicative of an excessive trading problem, and in which ways an excessive online trader could be compared to a pathological gambler. Other questions that were not the focus of the current study concerned the links between excessive trading and other types of addictions such as an Internet addiction, workaholism or compulsive buying disorder, which gambling activities most resembled excessive trading, which characteristics a good trader must have, which behaviors and attitudes would characterize an online trader that acts like a gambler, and their thoughts on brokerage firms selecting their brokers on the basis of their skills at poker.

Procedure

The focus groups were held at Université Laval in November 2012 and moderated by two psychology doctoral students. A financial compensation of CAN $75 was offered to the participants. The audio content of both meetings was recorded on compact discs. The transcription of each group verbatim for the purpose of analysis was completed by two undergraduate research assistants.

Data Analysis

Thematic analyses were performed on both verbatim by the first author. This method of analysis was conducted in five chronological steps described by Guest and MacQueen (2008). In the first step, the first author familiarized herself with the data to be analyzed. This step was achieved by reading the content of both verbatim from beginning to end at least once, followed by a search for patterns, recurring ideas or other data that was relevant to the research questions. The second step consisted in elaborating a system of codes, which were much more specific than the themes within which they were encompassed. The third step consisted in a first coding of the whole data set by the first author. This step was carried out with QDA Miner version 4.1.21 software, a product of Provalis Research. The fourth step consisted in an inter-rater agreement procedure to insure reliability of the analysis. To perform this step, a psychology doctoral student with experience in qualitative analysis familiarized herself with the coding manual. Although an inherent feature of qualitative research is the subjectivity of the researchers and coders, certain measures can be taken to maximize the credibility of the findings, ensuring that they do not simply reflect one coder's individual bias or agenda. To accomplish this, two coders met twice to debate codes (identified by the first author) and collaboratively agreed on the most meaningful interpretations of the focus group content. This process also included the calculation of an inter-rater agreement statistic, as described by Cohen (1960), on 50% of the verbatim content. An inter-rater agreement of 80% was set, in line with intercoder reliability standards (Neuendorf, 2002). Disagreements regarding the code definitions were discussed and the coding manual was adapted in consequence for an excellent final inter-rater agreement of 99.4% (Kripendorff's alpha = 0.89). Finally, the fifth phase was the interpretation of the results, which consisted in reflecting on the meaning of the themes and the way in which they provided answers to the research questions (see Results).

Results

The results are presented with respect to the research objectives of the study. Each theme is explained and illustrated by relevant quotations. All quotations were translated from French to English with care for the original intent of the message.

Signs of Excessive Trading

Themes evoked regarding the manifestations of an excessive practice of online stock trading generally concerned the considerable place that trading activities took in an online stock trader's life. This translated into three main themes, among which the concept of excess was the main thread.

Excessive preoccupation. This perceived manifestation of excessive trading may take many forms, such as thinking about investments when it is impossible to go online to check them, or worrying about quotes if they have not been checked for a certain period of time (e.g., a week). Excessive preoccupation was linked with

consequences, namely on health (e.g., sleep problems) or on work (e.g., interference with work).

> Nobody has ever complained about it, but personally, when I check my shares at the office, I don't consider myself to be, uh, a role model, a good example or anything like that. And yet, I still do it. I could only check at noon, but no. At one point: Ah! What I bought two hours ago, I wonder where it has landed?

Frequent behaviors. The frequency of behaviors such as checking stock prices and information search was reported as an aspect that distinguishes the excessive from the non-excessive online stock trader. Investing oneself excessively in online trading activities may bring the investor to neglect other domains of his life. In this vein, it was discussed that short-term investors such as day traders were possibly at higher risk of developing an excessive trading problem as they must monitor their shares and market fluctuations more frequently than long-term investors.

> A person who trades every day, you don't have a choice but to be there all the time, to always pay attention, whereas in long-term trading, you can let things go for a day or two, even up to a week depending on what you've invested in, without always having to wonder what is going on.

The role of limits. Limits were evoked as either a protective factor against developing excessive trading habits, or as a contributive factor to it. Namely, their absence may encourage frequent behaviors such as checking quotes or markets, or making transactions. Limits may also influence the extent to which the online trader grants his time and energy to his trading activities and/or prioritizes them over other things in his life, such as personal relationships or work. They may be self-imposed, allowing the online trader to avoid excess by better controlling his trading habits.

> I check every day, that's for sure. However, I limit the means that allow me to check. I don't have an iPhone or other gadgets that alert me every time something moves because personally, I think I could develop an addiction if I had access to those tools.

Moreover, limits may also have a positive influence even if they are imposed by the environment. Indeed, they may aid in preventing excessive trading behaviors that the trader may have difficulty controlling on his own.

> Sometimes I am glad when I have meetings because I can't check what is going on. Or when I have activities during the weekend, although I do sometimes trade in the Forex or gold or whatever. On weekends they are closed, but I mean on days like tomorrow, I take the day off to do other stuff. In those moments, I can't check my shares. I could probably still open some positions tomorrow morning, and in the evening I will return and find out whether I won or lost, but I will be unavailable to check during the day. It is a good thing that I can't check.

However, limits may also be perceived negatively, as they could prevent an online trader from trading as much as he wishes.

> For example, when a position closes at 5 p.m., I don't return to check my graph; I know it's over. However, if I am trading in the Forex, I can continue to check and the only thing that will make me stop is once Friday 10 p.m. hits, and then I have a two-day gap, otherwise I check. And even then, I have to analyze my titles to know which positions to take on Monday.

Consequences of Excessive Trading

The presence of consequences in the online trader's life was viewed as an indicator of excessive trading. Organizing one's life around trading and lacking or neglecting other activities was reported as the source of a problem.

> I think that if you have a balanced life, if you have lots of things to do, you can avoid problems, just like for everything else. If you concentrate your life on one thing only, if the only thing you like to do in life is collect hockey cards, then you won't do anything else, and you won't see your friends anymore, and you will eat alone. The same goes for trading. If you're always on the market and you're counting your cents, if you don't do anything else with your life, if you don't buy a car because a car is an expense, "I'm going to invest my money, I won't buy a house, it is an expense." Some people say that. I go in forums and there are people in Québec who say they will never buy a house because it is expensive, whereas the stock market will always go up or whatever. It's like concentrating your life on the stock market, focusing on one thing and closing yourself off from the rest of the world so you can just trade all the time. That is one thing you shouldn't do, so have a life filled with many passions and interests.

The consequences that were discussed concerned several domains, including financial, relational, professional/academic and health (i.e., physical and psychological). Relational consequences that were discussed included conflicts, lying, social isolation and loss of and/or jeopardizing significant relationships. Perceived financial consequences included losses and debt. It was also reported that financial consequences may generate consequences in other life domains. For example, losing important sums of money could contribute to relational problems (e.g., conflicts with spouse or partner) or health issues (e.g., anxiety).

> I have a colleague who took a second mortgage on his house that was already paid off to take advantage of what he thought was a pretty sweet deal, and it didn't work out in the end. He must now pay an extra mortgage and he says it himself, it wasn't the brightest move to make. I can imagine that his wife wasn't too happy.

As for health consequences, they may be physical, such as sleep difficulties, but especially psychological, namely anxiety, suicidal ideation and excessive preoccupation. Finally, it was reported that a problem on the stock market may generate the same consequences as those that the pathological gambler suffers from.

Links Between Excessive Trading and Gambling Disorder

When queried about the resemblances between an excessive online trader and a pathological gambler, the main characteristics evoked were the incapacity to stop trading when financial losses and/or other negative consequences begin to accumulate, as well as the tendency to chase losses.

> I would say that the best link I can see between trading and gambling addiction is someone who keeps falling in deeper and deeper, and yet keeps believing that he will recover his losses. Your action has dropped by 90% since the start of the year, but you will buy more of it because it will go up again. You're always digging your hole deeper, basically. Like the pathological gambler that says "Oh now I lost $10,000, my wife is going to kill me when I come home, I have to play another $10 so I can win back what I lost, so it won't create conflict in the family." To never stop, always tell yourself that you will get something out of digging the hole deeper but after all, never getting anything out of it. You're just always deeper and deeper into that hole.

Concerning chasing behaviors, the context within which an online stock trader chases his losses by reinvesting in the stock market was deemed important in determining whether such a behavior is adaptive or not.

> It depends on whether the person already has a bad habit and he tries to get out of that bad habit by doing the same thing. If a person that always buys titles that are commissioned, that are promoted and will drop again, if he always continues in that bad habit, he'll never beat it. It's the same thing for people who gamble with machines. I imagine that in every case, perseverance is more about developing a promising observation technique rather than always making the same mistake in order to try to get out of a bad habit.

However, chasing losses on the stock market was considered as a strategy that is usually maladaptive, as the market rarely fluctuates in a manner that can profit the trader.

> The chances of [French expression "se refaire" meaning "recovering your losses"] are slimmer when you have a title that is dropping. Market swings are much rarer than constants.

Discussion

This paper aimed to explore the perceptions of a sample of online stock traders concerning the manifestations and consequences of excessive trading, as well as the links between this activity and gambling disorder. To collect participants' ideas and opinions on this subject, two focus groups of online stock traders were formed based on trading frequency (i.e., a first group of individuals trading less than once a week and a second group trading at least once a week).

Signs of Excessive Trading

The first objective of this study was to explore perceptions concerning the manifestations of excessive trading. At a glance, the main themes reported bear many similarities with the clinical manifestations of gambling disorder. Among them figured excessive preoccupation, such as having one's mind fixated on stocks, financial news or any other information relevant to trading activities. Excessive preoccupation is a manifestation that can occur in the context of gambling disorder, where the person's thoughts are absorbed by gambling, whether about past experiences or future ventures (APA, 2013). While some individuals may trade as instantaneously as slot machine gamblers who see their bet in action rapidly won or lost, others trade over longer periods and cannot constantly monitor their positions. Thus, uncertainty regarding the outcome of the transaction persists until the trader's position is closed. Knowing that one's money is invested in stocks—and that a financial risk is being taken—is sufficient to cause a basic degree of vigilance for traders. Therefore, could the dynamic structure of the stock market be a factor in itself that promotes excessive preoccupation in traders? If so, how and when does an excessive trader's vigilance turn into unhealthy excessive preoccupation about financial holdings?

Excessive preoccupation may present itself simultaneously with frequent behaviors, such as checking one's stocks and the market. In this vein, it was discussed that short-term traders (e.g., day traders) are possibly at higher risk of developing excessive stock trading practices. Unlike long-term investments, short-term trading implies a higher volume of verifications and transactions that may be time-consuming to a point where the trader neglects other responsibilities. Financial returns over particularly short timeframes are practically impossible to predict (Chordia, Roll, & Subrahmanyam, 2005). Considering this, frequent trading behaviors begin to appear somewhat superfluous on the outcome of the transaction. So, what motivates short-term traders? Could it be the overconfidence that is generated by an illusion of control? Indeed, frequent trading behaviors may contribute to a feeling that the trader has more control over the outcome of his investments than he does in reality. This phenomenon has been addressed by Griffiths (1993) for a gambling context when he stated that "research has suggested that the more actively involved a person is with a gambling activity the more likely they are to believe that their actions can affect gambling outcomes, most probably through the illusion of control" (p. 109). Or could it rather be the thrill of the unpredictability and volatility of the market in a short-term time horizon that motivates these traders? In their study, Grall-Bronnec et al. (2015) observed that all the excessive stock traders they interviewed were short-term traders that constantly monitored the market and their titles. This behavior was considered as part of a need for sensation-seeking. Markiewicz and Weber (2013) have also demonstrated that risk-taking in day traders appears to be more of a means to experience thrill rather than to obtain the coveted financial gain.

In relation to the theme of frequent behaviors, participants evoked the concept of limits as a means to avoid excess. These limits could either be self-imposed or imposed by the environment (e.g., business hours of the market). The latter were

mentioned as useful when the trader's aptitude for self-control is lacking. Considering this, is it possible that traders who have greater difficulty in limiting their own trading activities are at greater risk for developing excessive trading behaviors than those who exercise such self-control on their own? The link between self-control and gambling severity has been studied previously in gamblers by Bergen et al. (2012); higher-risk gamblers as assessed with the Problem Gambling Severity Index (PGSI) demonstrated more considerable difficulty exercising self-control than lower-risk gamblers. Although the experience of limits imposed by the environment could be considered as positive by participants, they could also be perceived as an obstacle to trading activities. Indeed, they may limit traders who would otherwise continue to trade if those limits were not present. This raises the question of whether these traders are aware that excessive trading habits can cause potential harm. It is well known that problematic gambling habits are often denied and help is not sought until the resulting consequences have become severe (Evans & Delfabbro, 2005).

Consequences of Excessive Trading

The second objective of this paper was to explore online traders' perceptions regarding possible consequences that can result from excessive trading. Consequences reported in the focus groups concerned many domains, namely finances, relationships, work, and physical and psychological health. These consequences resemble those reported for pathological gambling (Shaffer & Korn, 2002). Participants reported that the presence of negative consequences is an important factor in determining whether the practice of stock trading is excessive or not. These consequences could be losses, but they could also concern neglect of responsibilities and other domains of life outside of trading activities. This result makes sense in light of research results on the effects of problem gambling. Indeed, the presence of consequences in the life of a gambler tend to indicate the severity of the gambling problem. Sleczka, Braun, Piontek, Bühringer and Kraus (2015) have shown that the DSM-5 criterion for consequences of gambling disorder (i.e., has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling) has high severity and discriminatory power, meaning that individuals who endorse this criterion tend to have a severe gambling problem when assessed with DSM-5 criteria. Since consequences that were evoked in the focus groups were often serious (e.g., suicidal ideations, sleep disruption because of waking up at 3 a.m. to check the market losing relationships), it is possible that the idea of an excessive stock trader underlying the participants' responses concerned a severe, more advanced level of a trading problem. If this was the case, future studies should aim to determine which signs would allow for an early detection of a trading problem before it becomes severe.

Links Between Excessive Trading and Gambling Disorder

The third objective of this study was to explore the links between excessive trading and gambling disorder according to online stock traders. The main resemblance between a problem gambler and an excessive online trader reported by the

participants was the incapacity to stop trading when problems begin to arise. This issue with self-control is well documented in problem gamblers (APA, 2013; Bergen et al., 2012; Blaszczynski & Nower, 2002). Interestingly, chasing one's losses was also mentioned as a common characteristic between problematic gamblers and online stock traders. This behavior was also observed by Grall-Bronnec et al. (2015) in their series of case interviews with excessive stock traders. Chasing losses is considered as the staple criterion of gambling disorder, in that it is what sets gambling disorder apart from other types of addictive disorders (APA, 2013). Further, it was evoked that chasing losses for traders is not a problematic behavior per se, but it is so in most cases. Thus, a specific aspect that could be important to consider in the assessment of excessive trading is the context within which trading habits occur. According to participants in the focus groups, this could help to determine whether a trader's behavior is problematic or not. This perception is supported by empirical data that suggest investors' behaviors and decisions vary depending on the state of the market (Kjelldorff & Keskitalo, 2009). Thus, the latter should be considered when studying excessive trading habits in future research, as certain behaviors could be deemed excessive in a declining market, but appropriate in a flourishing one, or vice-versa. Indeed, it has previously been argued that adaptive investor behavior must be flexible and dynamic, i.e., in sync with the market rather than static (Schultz, 2002). Finally, regarding chasing losses, it was reported as problematic when the trader repeats the same behavior (e.g., purchasing commissioned titles that decrease in value) while expecting a different outcome. This form of perseveration could be understood as related to the concept of overconfidence, a well-known cognitive bias in the field of behavioral finance. In this vein, Barber & Odean (2002) have suggested that overconfidence appears to be at the root of excessive trading practices, as overconfident individuals trade more while gaining less than more rational traders. Future studies could examine the link between chasing behaviors in trading and overconfidence.

Strengths and Limitations

Qualitative research in psychology allows for an in-depth exploration of a wide variety of ideas and opinions on a subject that has seldom been studied. The use of focus groups in this study allowed for the collection of unique data in scientific literature up to date, with online stock traders themselves discussing their perceptions of what characterizes excessive trading. This study design enabled the exploration of the phenomenon with a wider perspective by going beyond the spectrum of gambling disorder behaviors, which were frequently used as a reference for excessive trading behaviors in previous studies. Considering the subjective nature of thematic analysis in qualitative research, a strength of the present study concerns the involvement of two raters who met twice to debate codes (identified by the first author), and collaboratively agreed on the most meaningful interpretations of the focus group content. As for limitations, it is possible that certain important opinions regarding excessive trading may have gone unexpressed in the focus groups for one reason or another (e.g., lack of time, change of subject, etc.). In this vein, the small number of focus groups held may not have allowed to attain saturation of the discussed themes.

Another limitation concerns participants' knowledge of gambling disorder, which was not assessed prior to conducting focus groups, nor enhanced with education provided by the research team. Consequently, results are based on knowledge on gambling disorder that is potentially limited. Nevertheless, participants interestingly evoked resemblances of excessive stock trading with certain core features of gambling disorder (i.e., chasing losses and a deficit in self-control). Despite these limitations, the themes addressed in the focus groups provide valuable information for directing future research in the field of excessive trading and gambling problems. Future studies should aim to validate whether the perceptions of the sample of online stock traders collected for this paper are an accurate reflection of what constitutes an excessive trading practice.

Conclusion

In sum, this paper aimed to explore the perceptions of a sample of online stock traders regarding excessive stock trading. The findings illustrate that certain resemblances are perceived between the manifestations of excessive trading and gambling disorder. However, the dynamic nature of the stock market should be considered when assessing individuals that practice excessive online stock trading, as certain behaviors may be excessive in a given context, but not in another. Thus, future studies should further explore excessive trading behaviors and attempt to better discriminate when and how these behaviors are considered excessive.

References

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Arlington, VA: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Barber, B. M., & Odean, T. (2002). Online investors: Do the slow die first? *Review of Financial Studies 15*, 455–488. doi:10.1093/rfs/15.2.455

Bauer, R., Cosemans, M., & Eichholtz, P. (2009). Option trading and individual investor performance. *Journal of Banking and Finance, 33*, 731–746. doi:10.1016/j.jbankfin.2008.11.005

Bergen, A. E., Newby-Clark, I. R., & Brown, A. (2012). Low trait self-control in problem gamblers: Evidence from self-report and behavioral measures. *Journal of Gambling Studies, 28*, 637–648. doi:10.1007/s10899-011-9274-9

Blaszczynski, A., & Nower, L. (2002). A pathways model of problem and pathological gambling. *Addiction*, *97*, 487–499. doi:2002-13426-003

Bogan, V. (2008). Stock market participation and the Internet. *Journal of Financial and Quantitative Analysis*, *43*, 191–212. doi:10.1017/S0022109000002799

Brochu, P., Sévigny, S., & Giroux, I. (2015). Joueurs de poker en ligne: Perceptions liées au hasard et à l'habileté, raisons de jouer et émotions. [Online poker players: perceptions related to chance and skill, reasons to play and emotions]. *Journal of Gambling Issues*, *31*, 77–110. doi:10.4309/jgi.2015.31.7. Retrieved from: http://jgi.camh.net/index.php/jgi/article/view/3929/4061

Chordia, T., Roll, R., & Subrahmanyam, A. (2005). Evidence on the speed of convergence to market efficiency. *Journal of Financial Economics*, *76*, 271–292. doi:10.1016/j.jfineco.2004.06.004

Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, *20*, 37–46. doi:10.1177/001316446002000104

ComScore. (2009). Mobile Internet becoming a daily activity for many [Press release]. Retrieved from: https://www.comscore.com/Insights/Press-Releases/2009/3/Daily-Mobile-Internet-Usage-Grows

ComScore. (2010). Social networking ranks as fastest-growing mobile content category [Press release]. Retrieved from: http://www.comscore.com/fre/actualites_et_evenements/Communiques-de-presse/2010/6/Social-Networking-Ranks-as-Fastest-Growing-Mobile-Content-Category

Engwall, D., Hunter, R., & Steinberg, M. (2004). Gambling and other risk behaviours on university campuses. *Journal of American College Health*, *52*, 245–256. doi:10.3200/JACH.52.6.245-256

Evans, L., & Delfabbro, P. H. (2005). Motivators for change and barriers to help-seeking in Australian problem gamblers. *Journal of Gambling Studies*, *21*, 133–155. doi:10.1007/s10899-005-3029-4

Grall-Bronnec, M., Sauvaget, A., Boutin, C., Bulteau, S., Jiménez-Murcia, S., Fernández-Aranda, F., Challet-Bouju, G., & Caillon, J. (2015). Excessive trading, a gambling disorder in its own right? A case study on a French disordered gamblers cohort. *Addictive Behaviours*, *64*, 340–348. doi:10.1016/j.addbeh.2015.12.006

Granero, R., Tárrega, S., Fernández-Aranda, F., Aymamí, N., Gómez-Peña, M., Moragas, L., …. & Jiménez-Murcia, S. (2012). Gambling on the stock market: an unexplored issue. *Comprehensive Psychiatry*, *53*, 666–673. doi:10.1016/j.comppsych.2011.12.004

Griffiths, M. (1993). Fruit machine gambling: the importance of structural characteristics. *Journal of Gambling Studies*, *9*, 101–120. doi:10.1007/BF01014863

Guest, G., & MacQueen, K. M. (Eds.) (2008). *Handbook for team-based qualitative research*. Plymouth, UK: AltaMira Press.

Kairouz, S., & Nadeau, L. (2014). *Portrait of gambling in Quebec: Prevalence, incidence and trajectories over four years.* Montreal, QC: Concordia University Press. Retrieved from: https://www.concordia.ca/content/dam/artsci/research/lifestyle-addiction/docs/projects/enhjeu-q/ENHJEU-QC-2012_rapport-final-FRQ-SC.pdf

Kjelldorff, A., & Keskitalo, M. (2009). *Investor behaviour in bear and bull markets: A study of the PPM system* (Masters thesis). Retrieved from: http://arc.hhs.se/download.aspx?MediumId=851

Krueger, R. A., & Casey, M. A. (2014). *Focus groups: A practical guide for applied research* (4th ed.). Thousand Oaks, CA: Sage.

Ladouceur, R., Sylvain, C., Boutin, C., & Doucet, C. (2002). *Understanding and treating the pathological gambler*. Chichester, UK: Wiley.

Lévesque, D., Sévigny, S., Giroux, I., Jacques, C. (2017). The gambling-related cognitions scale (GRCS): Are skills-based games at a disadvantage? *Psychology of Addictive Behaviors*, *31*, 647–654. doi:10.1037/adb0000297

Lister, J. J., Nower, L., & Wohl, M. J. (2016). Gambling goals predict chasing behaviour during slot machine play. *Addictive Behaviours*, *62*, 129–134. doi:10.1016/j.addbeh.2016.06.018

Markiewicz, L., & Weber, E. U. (2013). DOSPERT's gambling risk-taking propensity scale predicts excessive stock trading. *Journal of Behavioral Finance*, *14*, 65–78. doi:10.1080/15427560.2013.762000

Neuendorf, K. A. (2002). *The content analysis guidebook*. Thousand Oaks, CA: Sage.

R. A. Malatest and Associates. (2014). *2014 British Columbia problem gambling prevalence study: Final report*. Victoria, BC: Gambling Policy and Enforcement Branch, Ministry of Finance. Retrieved from: http://www2.gov.bc.ca/assets/gov/sports-recreation-arts-and-culture/gambling/gambling-in-bc/reports/rpt-rg-prevalence-study-2014.pdf.

Schultz, H. J. (2002). *Bear market investing strategies*. TJ International, West Sussex, UK: Wiley.

Shaffer, H. J., & Korn, D. A. (2002). Gambling and related mental disorders: A public health analysis. *Annual Review of Public Health*, *23*, 171–212. doi:10.1146/annurev.publhealth.23.100901.140532

Shapira, N. A., Ferguson, M.-A., Frost-Pineda, K., & Gold, M. S. (2002). *Gambling and problem gambling prevalence among adults in Florida*. Maitland, FL: Florida Council on Compulsive Gambling.

Sleczka, P., Braun, B., Piontek, D., Bühringer, G., & Kraus, L. (2015). DSM-5 criteria for gambling disorder: underlying structure and applicability to specific groups of gamblers. *Journal of Behavioral Addictions*, *4*, 226–235. doi:10.1556/2006.4.2015.035

Turner, N. E. (2011). The addictiveness of online brokerage services: A first person account. *Journal of Gambling Issues*, *25*, 113–129. doi:10.4309/jgi.2011.25.9. Retrieved from: http://jgi.camh.net/index.php/jgi/article/view/3842/3887

Vaughn, S., Schumm, J. S., & Sinagub, J. (1996). *Focus group interviews in education and psychology*. Thousand Oaks, CA: Sage. doi:10.4135/9781452243641

Weber, E. U., Blais, A.-R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making*, *15*, 263–290. doi:10.1002/bdm.414

Wilkinson, S. (2004). Focus group research. In D. Silverman (Ed.), *Qualitative research: Theory, method and practice* (2nd ed., pp. 177–199). London: Sage.

Willig, C. (2001). *Introducing qualitative research in psychology: Adventures in theory and method*. Buckingham, UK: Open University Press.

Wood, R. T., & Williams, R. J. (2009). *Internet gambling: Prevalence, patterns, problems, and policy options*. Guelph, ON: Ontario Problem Gambling Research Centre. Retrieved from: http://www.abc.net.au/mediawatch/transcripts/0909_originalreport.pdf

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