

Is Pathological Trading an Overlooked Form of Addiction?

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Letter to Editor

The Editor

Trading can be defined as the activity of buying and selling financial instruments such as stocks, bonds, futures, commodities, and currencies (i.e., Forex). Both the small independent investor and the big financial operators may act in world markets. Nowadays, thanks to the Internet and the technological changes of recent decades, the trading of financial instruments has never been so easy. In fact, it is constantly growing the phenomenon of the online trading that allows to monitor in real time the progress of Stock Exchanges and to carry out the transaction instantaneously.

According to the Federal Reserve Board's Survey of Consumer Finances, in 2013, about one US family of two (48.8%) hold stock in publicly traded companies (either directly or indirectly), compared to 40.0% in 1995. Moreover, the mean value of stock holdings increased from \$228300 in 2010 to \$269900 in 2013, exceeding the mean value of \$254000 in 2007¹ (prior of the stock market crash of 2008). Despite the interest in the financial markets is steadily increasing worldwide, and it is accompanied by a growing number of suicides among traders² (professionals or not), the mental health community seems to have taken lightly the phenomenon of a "trading addiction."

So far, trading has not yet been officially recognized as an activity possible leading to addiction and the scientific literature about this is almost entirely absent. In fact, very few studies have investigated the presence of an addictive-like behavior among investors, and when that was done were used criteria of pathological gambling or other unspecified addiction criteria due to the lack of specific assessment tools.^{3,4} Collectively, these data lead us to believe that the presence of pathological trading among investors is a real phenomenon and that also represents an important public health problem that deserves the

attention of the scientific community. In this article, we describe the picture of a pathological trader based on our experience with similar patients and try to outline the possible research criteria to stimulate the research about this.

The proposed research criteria for pathological trading are shown in Table 1. Trading involves investing money to get more. Although most traders' retail (independent) and professional does not have problems, some individuals develop a substantial impairment related to their trading behaviors. The essential feature of pathological trading is a maladaptive behavior related to trading, persistent or recurrent; that disrupts the family, personal and/or professional activities. Pathological trading leads to a progressive loss of control over trading, tolerance and withdrawal symptoms similar to the symptoms present in substance use disorders.

In line with a previous case report,⁵ a common finding in our patients is that they report a number of small early wins followed by larger and more riskier investments. The compulsive trading activity brings the subject to gradually broaden the time spent on the Stock Exchange, keeping focused for much of the day on the financial markets (e.g., continuously check his positions). Trading becomes the main activity of daily life and the investor who uses trading compulsively does not possess a rational mastery of the behavior adopting, but feels uncontrollably driven to invest and continue to do so and more especially, in the case of financial losses, in the illusion of being able to restore control and recover losses ("chasing" one's losses). Particularly during high market volatility, a typical way for chasing losses is downward averaging or buying a title that has fallen in price and also investing in new and riskier financial instruments with increasing amounts of money. We are in agreement with the Turner's viewing⁵ that unlike chasing in pathological gambling, the

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Table 1. Pathological trading-proposed criteria

A. Persistent and recurrent problematic trading behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting five (or more) of the following in a 12-month period:
1. Is involved in compulsive daily trading activity (having persistent thoughts of reliving past trading experiences, analyzing or planning the next venture; persistently involved in reading financial literature or online forums; trading becomes the main activity of daily life Note: In the case of professional traders, it refers outside of working hours
2. Needs to trade with increasing amounts of money to achieve the desired excitement
3. Tolerance: Need to spend increasing amounts of time engaged in trading and/or need to look for new financial instruments to invest in
4. Is restless or irritable when attempting to cut down or stop trading
5. Altered sleep-wake rhythm (e.g., waking up at night to be connected at the opening of foreign financial markets) Note: In the case of professional traders, it refers outside of working hours
6. Has made repeated unsuccessful efforts to control, cut back, or stop trading Note: In the case of professional traders, it refers outside of working hours
7. Loss of interest in previous hobbies and activities as a result, and with the exception of, trading
8. Often trades when feeling stressed (e.g., helpless, guilty, anxious, depressed)
9. After losing money trading, often returns to trade immediately and/or another day to get even ("chasing" one's losses)
10. Lies to conceal the extent of involvement with trading (e.g., showing selective memory only for right investments; lying about the financial losses; magnification of being a great investor)
11. Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of trading
12. Relies on others to provide money to relieve desperate financial situations caused by trading
13. Suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide
B. The trading behavior is not better explained by another mental disorder

approach of value investing is not necessarily irrational, but try to compulsively recover losses through riskier financial instruments (e.g., leverage products, warrants; derivatives) and trade with increasing amounts of money are a sign of sensation-seeking, risk-taking and tolerance.

This can lead to a sense of omnipotence that strengthens a feeling of excitement which the addicted trader cannot longer do without and implies a systematic underestimation of the losses and risks. In particular, some traders start to fantasize about being a great investor and say things like "I have developed a system of stocks analysis better than Warren Buffett" or even "Soros was just lucky, while I'm superior, but nowadays the market is more manipulated," etc. Clearly, these thoughts represent a rationalization for loss of profits and economic losses that together with the selective memory for profits and the magnification of being a great investor represent a core feature of pathological trading. Moreover, the narcissism and the sense of infallibility of pathological traders are further enhanced by the continuous reading of financial literature and online forums for traders, in continuous search for possible information to design the next investment. Although this is a

practice more common among non-professional traders, it may be a good indicator of compulsion behind this "disorder" even among professional traders, especially if done outside of working hours. Typically, every trader starts buying specific books on the topic, regularly reads financial literature and also surfs the numerous online forums for traders on the network. Through the reading of the business press, the addicted traders convince themselves to become more and more experienced over time, leading them to believe that their predictions are infallible, resulting in an increasing sense of omnipotence.

Pathological trading has negative financial and psychosocial consequences. Surely pathological trading leads to a substantial loss of money which in turn determines the demand for loans to financial institutions and the family or friends. Often pathological traders lying to their relatives or friends to borrow money or even boasting to be excellent investors able to earn large sums of money. Sadly, when debts become unsustainable, and this also causes family and legal problems (e.g., divorce; fraud; job loss), pathological traders may present suicidal thoughts and many commit suicide.² Apart from the financial or social problems, pathological trading has a direct impact

on the health of the subject. In fact, the continued concern over the trading leads the trader to follow the markets constantly. Several traders report insomnia as they are also awake at particular times because of their superstitions or at night to follow the foreign markets, and some report to use substances of abuse (especially psychostimulants). This in turn can lead to mental disorders and some traders reported to trade as a way out from their depression, anxiety or boredom.³

A particular form of pathologic trading is online trading. In this case, besides being present all the features of the pathological trading, there are more additives and dangerous factors. The screens of the online brokerage sites resemble those of video games, and by clicking flashy colored buttons, it is possible to buy or sell financial instrument of all world markets. The network enhances the feeling of keeping everything under control, as it offers the opportunity to know in real time, at any time of day or night, the performance of Stock Exchanges. In addition, it is very easy to open an online trading account, and online brokers do not warn about the possibility of developing an addiction to trading. This is particularly dangerous because any person without adequate financial education can open an account, operate instantly and easily upgrade the account to advanced and risky form of trading such as margin trading (borrowing

against equity) and short selling (sale of a security that is not owned by the trader, or that the trader has borrowed).

In conclusion, we believe that pathological trading is of significant importance for public health and research could lead to evidence that this disorder deserves to be considered a disorder in its own right. It reflects the concept of addiction defined by Goodman,⁶ since it presents both dependence and compulsion. In fact, it has been shown that during financial investment the ventral striatum is activated⁷ (positive reinforcement/dependence), and that trading is a way of fighting against depression³ (negative reinforcement/compulsion). As with other forms of addiction (whether they are by substances or behavioral), should be designed specific assessment tools to conduct epidemiological studies to determine the prevalence, clinical course, and possible biopsychosocial influences. Clinicians need to be aware that this form of addiction can pass unnoticed for a long time and could be misunderstood by both the traders and their relatives, as the financial losses are more easily attributed to wrong investments than a pathological compulsive behavior. Finally, evidence resulting from research on this topic might help policymakers to regulate this phenomenon, as it was done with pathological gambling.

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