From Concerns About Addiction to the *Internet Gaming Disorder* Diagnosis[1]

RUNE KRISTIAN LUNDEDAL NIELSEN

Currently, only one type of human behaviour is officially classified as potentially addictive to humans, at least according to the fifth and most recent edition of the *Diagnostic and statistical manual of mental disorders* (*DSM-5*) (American Psychiatric Association, 2013). The *DSM*, published by the American Psychiatric Association (APA), provides clinicians, researchers and other mental health professionals with a common vocabulary, which is meant to ensure that diagnoses are accurate and consistent. As such, the advent of the *DSM* represents a significant step forward from times when the range of diagnoses a person could conceivably receive depended largely, or perhaps entirely, on which individual psychiatrist was consulted.

The *DSM* is meant to provide a common nomenclature for researchers and clinicians, which ensures that diagnoses are used consistently and accurately (ibid.). In everyday language, most relationships between a person and an activity or everyday object can be described as an addiction. Thus, terms like *workaholic*, *television addict*, *sexaholic*[2], *shopaholic*, etc. have long since entered our cultural vocabularies. However, in the official clinical vocabulary of the *DSM*, all addictions, except one, are substance addictions such as *tobacco use disorder* and *alchohol use disorder*[3]. Only one human activity is listed under the non-substance

1 This chapter is based on chapter one of the PhD dissertation *Is game addiction a mental disorder?* (Nielsen, 2017).

2 Wikipedia lists four 12-step programs designed to help sex addicts: *Sex Addicts Anonymous*, *Sex and Love Addicts Anonymous*, *Sexual Compulsives Anonymous* and *Sexual Recovery Anonymous* (Sexaholics Anonymous, 2016).

3 In the DSM-5 the word addiction is not used as a diagnostic term. The DSM-5 instead

related addictive disorders: gambling. The *DSM-5* lists *Internet gaming disorder* as a disorder for further study, i.e. a disorder that is believed to exist pending further research. The distinction between clinical terminology and lay terminology is important because, while a lot of people might refer to themselves (or perhaps more commonly – other people in their lives) as 'Netflix-addicts', this label does not necessarily carry specific connotations of pathology, disease or even negative consequences. In a professional psychiatric and psychological sense, however, an addiction would have to cause significant distress, disability or risk in order to meet the criteria for a disorder. In the words of the *DSM-IV-TR* (APA, 2000) a mental disorder is defined as follows:

> A clinically significant behavioural or psychological syndrome or pattern that occurs in an individual and that *is* associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom. In addition, this syndrome or pattern must not be merely an expectable and culturally sanctioned response to a particular event, for example, the death of a loved one. Whatever its original cause, it must currently be considered a manifestation of a behavioural, psychological, or biological dysfunction in the individual. Neither deviant behaviour (e.g., political, religious, or sexual) nor conflicts that are primarily between the individual and society are mental disorders unless the deviance or conflict is a symptom of a dysfunction in the individual, as described above. (APA, 2000, p. xxxi, emphasis added)

Compared to its predecessor, the fifth edition of the *DSM* significantly broadens the scope of what can be considered a metal disorder. The definition no longer requires that disorders are associated with present distress or disability. The *DSM-5* replaces the word *is*, which I emphasized in the quote from the *DSM-IV-TR* above, with *usually*, as emphasized in the following passage:

> A mental disorder is a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behaviour that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are *usually* associated with significant distress in social, occupational, or other

uses the more neutral term substance use disorder. Some clinicians, according to the APA, will use the term addiction to describe extreme cases, but because of its uncertain definition and potentially negative connotations the DSM-5 does not use it (APA, 2013). It is used, however, in the overall classification of the substance-related addictive disorders.

important activities. An expectable or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a mental disorder. Socially deviant behaviour (e.g., political, religious, or sexual) and conflicts that are primarily between the individual and society are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above. (APA, 2013, p. 20, emphasis added)

This change to the *DSM* opens the door for potentially classifying an unknown number of previously non-pathological behaviours as mental disorders. This is especially true because in the *DSM-5* the APA, at the same time, introduces *non-substance-related-disorders* under the *addictive disorders*, that is, the notion that human behaviour can become addictions. Members of the work group that voted to create a new category for behavioural addictions acknowledge that the move is controversial for exactly these reasons:

The inclusion of internet gaming disorder in Section 3 of DSM-5 opens discussions for other 'behavioural addictions', a highly controversial topic. Introducing conditions into the DSM-5 that are not well established or that do not cause significant distress and impairment (e.g. chocolate addiction) will lower the credibility of psychiatric disorders more generally, thereby undermining the seriousness of psychiatric disorders. Thus, strong empirical data will – and should be – required to include new mental disorders, including internet gaming disorder, in future versions of the DSM. (Petry & O'Brien, 2013, p. 1187)

Just which behaviours should be viewed with concern seems to be a highly personal and subjective matter. The present chapter will argue that the idea, that computer games cause addiction, lacks scientific evidence.

Petry and O'Brien (2013) caution that behaviours which do not cause significant distress and impairment should not lightly be included into diagnostic manuals. In the present writing, I advocate a more restrictive definition of mental disorders that would require significant distress or impairment to be present. If a given behaviour or belief is not associated with distress or disability or is caused by dysfunction, it cannot meaningfully be said to be a mental disorder (nor, by extension, can it be said to be an addiction). Not using such strict definitions runs the risk of over-pathologizing behaviour that deviates from cultural norms. Historically, societal worries have played too large of a role in the identification and definition of mental illness. *Nymphomania* and *homosexuality* are two diagnoses that are widely considered to be outdated, though not universally so.

The role of morality and cultural norms in the historical conceptualization of gambling as a mental disorder will be the topic of the next section. This is a relevant discussion because the *DSM* criteria for gambling disorder form the basis of Internet gaming disorder today.

GAMBLING AND MORALITY

One cannot discuss Internet gaming disorder without discussing *pathological gambling disorder* because the criteria for the latter form the basis for the former. One overview of the largest survey studies of computer game addiction found that 15 out of 23 surveys used screening tools that were directly based on *DSM* criteria (Griffiths, Kuss & King, 2012) (many others were indirectly inspired by the *DSM*). Because many of these studies simply replace the word *gambling* with *playing computer games*, it is worthwhile digging into the history of the concept of pathological gambling (now gambling disorder).

The desire to move away from moral judgments was a large part of the motivation for the induction of pathological gambling as a psychiatric disorder in the *DSM* (National Research Council, 1999). When gambling disorder was first introduced in the *DSM* in 1980, it was called pathological gambling. According to Reilly & Smith (2013), the diagnosis *pathological gambling* largely came about due to the efforts of Dr Robert Custer. Custer had been treating pathological gamblers and writing about their illness for years. The diagnosis was based on Custer's and other treatment professionals' clinical experience (ibid.). The *DSM-III* classified *pathological gambling* as an impulse control disorder, not an addiction; the disorder was described first with a statement about the essential feature of the disorder: the individual's experience of a mounting loss of control of their gambling behaviour due to inability to resist impulses to gambling. The disorder was further described with a list of seven items, which emphasized damage and disruption to the individual's family, personal, vocational or financial spheres, as listed in Box 1.

The typical pathological gambler was described as someone whose gambling preoccupation, urge and activity increase during periods of stress; furthermore, the problems that arise as a consequence of gambling only serve to intensify the gambling behaviour. Commonly, pathological gamblers were described as endorsing the belief that money, at the same time, is the cause of and the solution to all of their problems (ibid.).

According to an expert panel critical to the DSM (NRC, 1999), the introduction of pathological gambling into the DSM can be seen as a fundamental

Box 1: DSM-III criteria for pathological gambling

1. arrest for forgery, fraud, embezzlement, or income tax evasion due to attempts to obtain money for gambling
2. default on debts or other financial responsibilities
3. disrupted family or spouse relationship due to gambling
4. borrowing of money from illegal sources (loan sharks)
5. inability to account for loss of money or to produce evidence of winning money, if this is claimed
6. loss of work due to absenteeism in order to pursue gambling activity
7. necessity for another person to provide money to relieve a desperate financial situation

Source: APA, 1980, p. 293.

shift in the perception of people who gamble excessively: earlier people used to have gambling problems, however, after the *DSM-III*, these people were considered pathological gamblers. Gambling problems were medicalized and came to be seen as a robust disease state (NRC, 1999). Gambling, like alcoholism, came to be widely understood as a chronic psychiatric illness that one never fully recovers from. No matter how long pathological gamblers abstain from gambling, they are never cured; they are always in a state of recovery (NRC, 1999). According to the NRC, this view is based on belief rather than on scientific knowledge. They consider it to be unknown whether returning to social gambling is, in fact, possible or not: "There is no direct empirical evidence supporting either the possibility that pathological gamblers can or cannot return to and remain in a state of social or recreational gambling" (NRC, 1999, p. 20).

The gamblers' self-help organization, Gamblers Anonymous, has played a large role in how the world perceives gambling and, by extension, Internet gaming addiction. The organization goes back to 1957, where its inaugural meeting of Gamblers Anonymous took place in Los Angeles. Central to the organization's view is the idea that character change in the individual is the way to recovery; or at least to ameliorate gambling behaviour and its negative effects (ibid.). The self-help organization builds its approach on the basic tenant that positive change can be made by adopting similar spiritual principles used by those recovering from other addictions (ibid.).

The NRC notes that as Gamblers Anonymous expanded, the 20 questions they used to diagnose pathological gambling (see Box 2) became the de facto standard to evaluate whether or not gambling behaviours were compulsive (NRC, 1999).

Box 2: Gamblers Anonymous' twenty questions

1. Did you ever lose time from work or school due to gambling?
2. Has gambling ever made your home life unhappy?
3. Did gambling affect your reputation?
4. Have you ever felt remorse after gambling?
5. Did you ever gamble to get money with which to pay debts or otherwise solve financial difficulties?
6. Did gambling cause a decrease in your ambition or efficiency?
7. After losing did you feel you must return as soon as possible and win back your losses?
8. After a win did you have a strong urge to return and win more?
9. Did you often gamble until your last dollar was gone?
10. Did you ever borrow to finance your gambling?
11. Have you ever sold anything to finance gambling?
12. Were you reluctant to use "gambling money" for normal expenditures?
13. Did gambling make you careless of the welfare of yourself and your family?
14. Did you ever gamble longer than you had planned?
15. Have you ever gambled to escape worry or trouble?
16. Have you ever committed, or considered committing, an illegal act to finance gambling?
17. Did gambling cause you to have difficulty in sleeping?
18. Do arguments, disappointments or frustrations create within you an urge to gamble?
19. Did you ever have an urge to celebrate any good fortune by a few hours of gambling?
20. Have you ever considered self-destruction as a result of your gambling?

Source: NRC, 1999, p. 271.

These questions, in turn, became the basis for subsequent classification systems that determine the chronicity and seriousness of gambling problems. In the third version of the DSM, published in 1980, explanations of the cause of gambling problems began to focus on the gambler's personal attributes, rather than solely on social and economic consequences (ibid., p. 11).

Henry Lesieur and Robert Custer (1984) recount how, in the 19th century and for most of the 20th, the dominant view of those who gambled beyond their means was based on moral judgment. On the basis of Protestant ethics, the heavy gambler

was seen as a sinner or a criminal, who gambled out of a slothful desire to avoid honest work. Gradually, however, beginning with psychoanalytic theorists and continuing to the establishment of Gamblers Anonymous, this view was challenged. Lesieur and Custer argue that, in place of a moral model, a medical or illness model be embraced. This implies the need of treatment, rather than moral condemnation (ibid.).

According to the NRC (1999), the disorder was included in the DSM-III without any testing of the criteria beforehand, relying solely on clinical experience with little empirical support outside of the treatment context. Since most pathological gamblers never seek treatment, it may be problematic to base a clinical description solely on those who do (ibid.).

One practical reason for labelling excessive gambling behaviour as a disorder lies in the severe negative financial and personal consequences that, presumably, come with prolonged indulgence. This, combined with cognitive distortions, such as the belief that more gambling can fix gambling problems, as well as other hallmarks of gambling disorder (chasing behaviour, relapses after attempted abstinence, etc.) are common sense indicators that this type of gambling behaviour ought to be treated as a type of addictive disorder. It is important to keep in mind, however, the perspective that, in the words of some scholars: "the basis for believing that pathological gambling should be classified as an addiction is almost entirely theoretical" (NRC, 1999, p. 37).

In the case of excessive computer game playing, likewise, the basis for believing that an addictive disorder is its root cause is almost entirely theoretical. In the absence of thorough clinical case studies, we are left with the theoretical belief that, because computer games are games and gambling games are also games, they have similar consequences.

THEORETICAL ROOTS OF BEHAVIOURAL ADDICTION

A considerable part of the theoretical foundation of most game addiction research is based on the notion of behavioural addictions in general; and more specifically on the work of R. Iain F. Brown (e.g. 1991; 1997). In this theoretical perspective, many (if not all) mundane human activities can be addictive. Brown (1991) lists, in total, 40 addictions, of which 22 are substance addictions and 18 non-substance addictions. The list was originally presented in a paper at a conference on gambling and risk taking by Witman, Fuller and Taber (1987). These 18 non-substance addictions are extracted in Box 3.

Box 3: Addictive activities according to Witman and colleagues (1987)

Gambling for money
Stealing, shoplifting, petty theft, etc.
Spending just for the sake of spending
Work for the sake of being busy
Anger, fights and arguments.
Trying to manipulate and/or control other people
Trying to get attention for attention's sake
Reading for reading's sake
Trying to get others to take care of me and do things for me
Exercise, jogging, playing sports, or working out
Seeking and having sex with another person
Seeking and using pornography (sexually oriented pictures, book, etc.)
Watching television
Talking for talking's sake
Searching for, buying and collecting items
Lying (for no good reason)
Fast and/or reckless (not to include driving under the influence)
Physical violence

Source: Brown, 1991, pp. 112-113.

Among the substance oriented activities listed are psycho-active substances, which are commonly considered addictive (cocaine, heroin, amphetamines, morphine, marijuana, etc.), but it also includes other substances such as "sugar based foods (candy, baked goods, ice cream, etc.)"; "fatty, oily or greasy foods"; "salt from the shaker/salty foods"; "highly seasoned foods"; "laxatives"; etc. (ibid.). Based on this framework, any conceivable ingestible substance and any conceivable activity can, in my view, be described as an addiction. For Brown (1991), addiction is a value-free concept (or at least, he argues, it should be) and, as such, is more of a metaphorical or theoretical framework to understand and describe human behaviour, which does not necessarily entail the negative impact required of mental disorders. Brown (1991) builds this notion of addiction on the work of William Glasser (1976), who describes the phenomenon of *positive addiction*. In Glasser's view, positive addictions are the remedy to the human weakness that causes us to give up when the struggle becomes too much. Unlike negative addictions that weaken and destroy us, positive addictions strengthen us and make our lives more satisfying. The most salient examples of positive addictions in

Glasser's book *Positive addiction* (1976) are different kinds of exercise addictions. Clearly, the caveat, that some addictions are a source of strength, is important. Brown (1991) specifically mentions "gaming and simulation" (p. 112) as an addiction that might best be understood as a "Mixed Blessing Addiction" (p. 112).

Box 4: Proposed Internet addiction diagnostic criteria

a. Symptom criterion
All the following must be present:
Preoccupation with the internet (thinks about previous online activity or anticipates next online session)
Withdrawal, as manifested by a dysphoric mood, anxiety, irritability and boredom after several days without internet activity

At least one (or more) of the following:
Tolerance, marked increase in internet use required to achieve satisfaction
Persistent desire and/or unsuccessful attempts to control, cut back or discontinue internet use
Continued excessive use of internet despite knowledge of having a persistent or recurrent physical or psychological problem likely to have been caused or exacerbated by internet use
Loss of interests, previous hobbies, entertainment as a direct result of, and with the exception of, internet use
Uses the internet to escape or relieve a dysphoric mood (e.g. feelings of helplessness, guilt, anxiety)

b. Exclusion criterion
Excessive internet use is not better accounted for by psychotic disorders or bipolar I disorder
c. Clinically significant impairment criterion
Functional impairments (reduced social, academic, working ability), including loss of a significant relationship, job, educational or career opportunities
d. Course criterion
Duration of internet addiction must have lasted for an excess of 3 months, with at least 6 hours of internet usage (non-business/non-academic) per day.

Source: Tao et al., 2010, p. 563.

This distinction between positive and negative addictions has been lost as the concept has been picked up and elaborated upon by different researchers. In Glasser's (1976) and Brown's (1991) work the distinction is still salient, but when Mark Griffiths (1996) picked up the term and later conceptualized and operationalized it (e.g. Griffiths & Davies, 2005), this qualification was no longer a part of the construct. Tao and colleagues (2010) are inspired by Griffiths (1996), among others, when they formulate proposed diagnostic criteria for 'Internet addiction' (see Box 4 below). Tao and colleagues' (2010) definition has rather broad inclusion criteria, but also rather strict exclusion criteria. According to the diagnostic criteria, a person can be said to be addicted to the Internet if the person thinks about online activity and also uses online activities to feel better. At first glance, then, the bar for when a person is considered to be an addict is pretty low. However, the final exclusion criteria states that Internet use has to exceed six hours a day for more than three months.

According to Petry and O'Brien (2013), this proposed definition forms the basis for Internet gaming disorder in the *DSM-5*. It is unclear to me why the workgroup, when adapting these criteria, decided to change the disorder from a general addiction to Internet activities into an addiction that focuses solely on Internet gaming. The *DSM-5*'s criteria do not feature the same strict exclusion criteria (see Box 5).

I would argue that what we have seen is a tendency to move towards broader and more inclusive definitions of what it is to suffer from an addictive mental disorder. This shift began with a theoretical move that took pathological gambling from a compulsive disorder to an addiction[4]. We can see this move occurring by comparing the original DSM-III (APA, 1980) criteria for gambling (listed in Box 1) with the revised version, DSM-III-R, which was published just seven years later shows (see Box 6).

Whereas the DSM-III focuses heavily on the observable outcomes or negative effects of gambling, the DSM-III-R focuses on psychological experiences of addiction. The latter are arguably more ambiguous in terms of negative impact. As an example, item number one in the DSM-III asks about conflicts with law en-

4 When gambling disorder was first introduced into the DSM in 1980 it was called pathological gambling and was categorized as an impulse control disorder a long with disorders such as kleptomania (cf. APA, 1980). Pathological gambling re-mained the official term throughout the ensuing editions of the DSM (APA, 1987; 1994; 2000) until 2013 when the disorder was renamed gambling disorder and be-came a non-substance addiction (APA, 2013).

Box 5: Internet gaming disorder

Proposed Criteria

Persistent and recurrent use of the Internet to engage in games, often with other players, leading to clinically significant impairment or distress as indicated by five (or more) of the following in a 12-month period:

1. Preoccupation with Internet games. (The individual thinks about previous gaming activity or anticipates playing the next game; Internet gaming becomes the dominant activity in daily life). **Note:** This disorder is distinct from Internet gambling, which is included under gambling disorder.
2. Withdrawal symptoms when Internet gaming is taken away. (These symptoms are typically described as irritability, anxiety, or sadness, but there are no physical signs of pharmacological withdrawal.)
3. Tolerance – the need to spend increasing amounts of time engaged in Internet games.
4. Unsuccessful attempt to control the participation in Internet games.
5. Loss of interests in previous hobbies and entertainment as a result of, and with the exception of, Internet games.
6. Continued excessive use of Internet games despite knowledge of psychosocial problems.
7. Has deceived family members, therapists, or others regarding the amount of Internet gaming.
8. Use of Internet games to escape or relieve negative mood (e.g., feelings of helplessness, guilt, anxiety).
9. Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of participation in Internet games.

Note: Only nongambling Internet games are included in this disorder. Use of the Internet for required activities in a business or profession is not included; nor is the disorder intended to include other recreational or social Internet use. Similarly, sexual Internet sites are excluded.

Specify current severity:

Internet gaming disorder can be mild, moderate, or severe depending on the degree of disruption of normal activities. Individuals with less severe Internet gaming disorder may exhibit fewer symptoms and less disruption of their lives. Those with severe Internet gaming disorder will have more hours spent on the computer and more severe loss of relationships or career or school opportunities.

Source: APA, 2013, pp. 795-796.

Box 6: Pathological gambling

1. frequent preoccupation with gambling or with obtaining money to gamble
2. frequent gambling of larger amounts of money or over a longer period of time than intended
3. a need to increase the size or frequency of bets to achieve the desired excitement
4. restlessness or irritability if unable to gamble
5. repeated loss of money by gambling and returning another day to win back losses ("chasing")
6. repeated efforts to reduce or stop gambling
7. frequent gambling when expected to meet social or occupational obligations
8. sacrifice of some important social, occupational, or recreational activity in order to gamble

Source: APA, 1987, p. 325.

forcement due to gambling, whereas item one of the DSM-III-R asks about preoccupation with (or thinking about) gambling. Thinking a lot about something is obviously a negative experience if the thoughts are egodystonic, i.e. are experienced as unpleasant, intrusive or incongruent with one's view of oneself. Conversely, thinking a lot about something may obviously be positive if the thoughts are egosyntonic, i.e. pleasurable anticipation that is congruent with one's view of oneself. Indeed, some languages have idioms to the effect that the joy of anticipation is the greatest joy[5]. The softening and broadening of the gambling criteria continued when researchers adapted the criteria to measure computer game addiction in prevalence studies.

5 In Denmark, the idiom is often ascribed to the Danish philosopher Søren Kierkegaard, who according to myth, once took his fiancée to see Mozart's *Don Juan* only to usher her out during the overture with the words: Now we leave, now that you've had the best, the joy of anticipation! According to the fiancée the truth behind the myth is that they left after the first act because Søren Kierkegaard had a headache (Clausen, 1941, pp. 86-89, in Kirmmse, 1996, p. 83).

CONCLUSION

This chapter has sought to critically describe the process that has led to the proposal of Internet gaming disorder as a disorder for further study. In doing so, it has been argued that the horse has been put before the cart in two ways. First, it is problematic to base a model of addiction as a pathology on a model which views addictions as either positive, negative or "mixed-blessings" (cf. Brown, 1991). In other words, I have argued that it is important not to conflate *addiction-as-a-disorder* with *addiction-as-neither-positive-or-negative*. Second, it is problematic that the diagnostic criteria for Internet gaming disorder are not a product of clinical descriptions of the disorder, but are instead adapted from gambling disorder. This is especially problematic if the rational for categorizing gambling disorder as an addiction is primarily theoretical, as the NRC suggests (1999). Based on the evidence produced in this chapter, I would argue that any psychiatric description of disordered gaming should be approached *bottom-up* with clinical descriptions of *pathological gaming*, as was the case when *pathological gambling* was first introduced in the *DSM*. The current *top-down* description, where diagnostic criteria from one domain is applied almost verbatim to another, runs the risk of pathologizing everyday behaviour. This *top-down* approach puts the horse before the cart by measuring computer game addiction before it has been established that an addiction exists in the first place.

LITERATURE

American Psychiatric Association (Ed.). (1980). *Diagnostic and statistical manual of mental disorders: DSM-III* (3rd ed.). Washington, D.C.: American Psychiatric Association.

American Psychiatric Association (Ed.). (1987). *Diagnostic and statistical manual of mental disorders: DSM-III-R* (3rd ed., revised). Washington, D.C.: American Psychiatric Association.

American Psychiatric Association (Ed.). (1994). *Diagnostic and statistical manual of mental disorders: DSM-IV* (4th ed.). Washington, D.C.: American Psychiatric Association.

American Psychiatric Association (Ed.). (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR* (4th ed., text revised). Arlington, VA: American Psychiatric Association.

American Psychiatric Association (Ed.). (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (5th ed.). Washington, D.C.: American Psychiatric Publishing. doi:10.1176/appi.books.9780890425596

Brown, R. I. F. (1991). Gaming, gambling and other addictive play. In M. J. Apter & J. H. Kerr (Eds), *Adult play: A reversal theory approach*. Amsterdam: Garland Science.

Brown, R. I. F. (1997). A theoretical model of the behavioural addictions – Applied to offending. In J. E. Hodge, M. McMurran & C. R. Hollin (Eds), *Addicted to crime?* (pp. 13-65). Chichester: John Wiley.

Clausen, J. (1941). *Mennesker paa min Vej, Minder fra de unge Dage* [People met on my way, memories from the early days]. Copenhagen: Gyldendal.

Glasser, W. (1976). *Positive addiction*. New York City: Harper & Row.

Griffiths, M. (1996). Nicotine, tobacco and addiction. *Nature, 384*(6604), 18. doi:10.1038/384018a0

Griffiths, M. & Davies, M. N. O. (2005). Videogame addiction: Does it exist? In J. Goldstein & J. Raessens (Eds), *Handbook of computer game studies* (pp. 359-369). Boston, MA: MIT Press.

Griffiths, M., Kuss, D. & King, D. (2012). Video game addiction: Past, present and future. *Current Psychiatry Reviews, 8*(4), 308-318. doi:10.2174/1573400128035204 14

Kirmmse, B. H. (1996). *Søren Kierkegaard truffet, et liv set af hans samtidige* [Søren Kierkegaard encountered, a life from the perspective of his contemporaries]. Copenhagen: C.A. Reitzel.

Lesieur, H. R. & Custer, R. L. (1984). Pathological gambling: Roots, phases, and treatment. *The Annals of the American Academy of Political and Social Science, 474*(1), 146-156. doi:10.1177/0002716284474001013

National Research Council. (1999). *Pathological gambling: A critical review*. Washington, D.C.: National Academies Press.

Nielsen, R. K. L. (2017). Is game addiction a mental disorder? A dissertation on the history and science of the concept of Internet gaming disorder (Doctoral dissertation). IT University of Copenhagen, Copenhagen.

Petry, N. M. & O'Brien, C. P. (2013). Internet gaming disorder and the DSM-5. *Addiction, 108*(7), 1186-1187. doi:10.1111/add.12162

Reilly, C. & Smith, N. (2013). *The evolving definition of pathological gambling in the DSM-5*. Retrieved from http://www.ncrg.org/sites/default/files/uploads/docs/white_papers/internetgambling_final.pdf

Sexaholics Anonymous. (n.d.). In *Wikipedia*. Retrieved 20 November, 2016, from https://en.wikipedia.org/w/index.php?title=Sexaholics_Anonymous&oldid=750625317

Tao, R., Huang, X., Wang, J., Zhang, H., Zhang, Y. & Li, M. (2010). Proposed diagnostic criteria for internet addiction. *Addiction, 105*(3), 556-564. doi: 10.1111/j.1360-0443.2009.02828.x

Witman, G. W., Fuller, N. P. & Taber, J. I. (1987). Patterns of polyaddictions in alcoholism patients and high school students. In W. R. Eadington (Ed.), *Gambling research: Proceedings of the seventh international conference on gambling and risk taking*. Reno, NV: University of Nevada.