



Many popular video games—including (left to right) “League of Legends,” “Grand Theft Auto” and “Bioshock Infinite: Burial at Sea”—prominently feature characters smoking.

Truth Initiative and other partners in the public health community have worked together to raise awareness of “smoking in the movies” and the influence of tobacco imagery in films on youth audiences.

Movies are just a fraction of the screened entertainment consumed by adults and youth alike. And the influence of smoking imagery in entertainment is not confined to feature films. This paper explores tobacco use in a medium that is firmly established as a channel for youth and young adults: video games.

We have reviewed the available existing research on tobacco use in video games, conducted interviews with gamers about their experiences with tobacco imagery in video games and summarized what we have found thus far. We are a public health organization working to change cultural norms associated with tobacco and help create the first

“ I mean of course it was very influential because you were seeing it over and over. It’s described as cool. It’s described as something that grown-ups do, strong men, people who have things in life, careers, things like that. So it did really affect me. ” - Male, 18 to 21 years old

tobacco-free generation of youth. This paper should be a foundation for the emerging conversation about smoking and video games. We hope it will lead to more research on whether such images are influencing kids to smoke and more interest in, and enthusiasm for, potential changes within the video gaming industry.

IN THIS REPORT

WHAT YOU SHOULD KNOW ABOUT TOBACCO USE IN VIDEO GAMES:

- Tobacco use is prevalent in video games played by youth.
- Tobacco use in video games is viewed as making characters “tougher,” “grittier” or “cooler.” In some cases, players can choose to make their characters use tobacco, and in other cases, players have no choice about whether their characters use tobacco. Some games even reward tobacco use by giving players certain advantages for interacting with it.
- Tobacco use in video games is likely to promote youth smoking. The U.S. Surgeon General has concluded that exposure to tobacco use in films promotes youth smoking. Playing video games, which youth spend more time doing than going to movies and which are more active and intense experiences, is likely to work in similar ways.
- Video game content descriptors often fail to mention tobacco use, making it difficult for parents and guardians to be aware of the issue.

WHAT INDIVIDUALS AND ORGANIZATIONS CAN DO TO ENSURE TOBACCO USE IN VIDEO GAMES IS NOT CONTRIBUTING TO YOUTH TOBACCO USE:

- Monitor the content of games purchased for and used by youth.
- Urge the Entertainment Software Rating Board (ESRB) to rate games containing tobacco with a “Mature” rating, and disclose tobacco use in all games where it occurs.
- Call on game developers and publishers to immediately stop including tobacco use and tobacco images in their games, particularly those marketed to or played by youth.

“ He’d be smoking a cigar, and it kind of made him look more important and more in charge, you know. He was the cool-looking dude, and he’s smoking this big cigar, and he’s giving orders to his people. ”

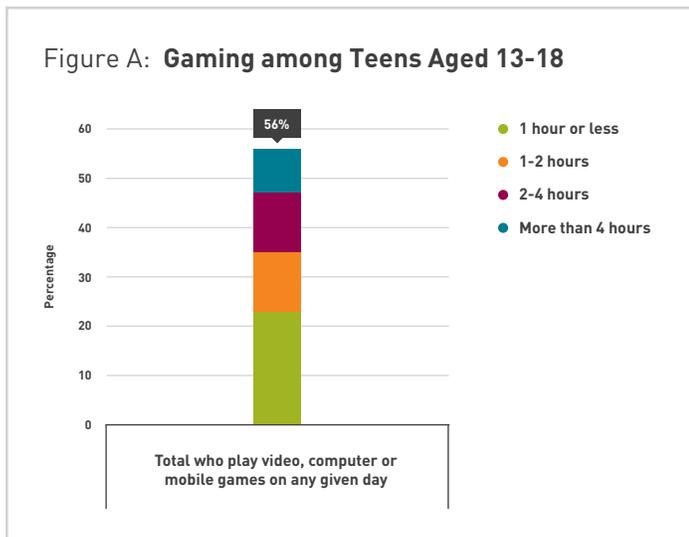
- Male, 18 to 21 years old



One of the heroes in “Overwatch,” a popular “Teen”-rated game released in 2016, is regularly shown smoking a cigar.

BACKGROUND

According to the 2015 Common Sense Census, American teens, aged 13 to 18, are exposed to an average of nearly nine hours of entertainment media on any given day. Playing video games ranks as the second favorite media activity for teens, and 56 percent of teens play video, computer or mobile games on any given day. Those teens who play games average two hours and 25 minutes per day (Figure A). Overall, teens spend more time per day on average playing video, computer or mobile games than using social media. Playing games takes up more time than any other media activity besides watching television and videos and listening to music.¹



Source: Common Sense. *The Common Sense Census: Media Use by Teens and Tweens. 2015.*

We know that entertainment media has a strong influence on tobacco use. In its 2012 monograph on the role of media in tobacco use, the National Cancer Institute (NCI) found that, “media communications play a key role in shaping tobacco-related knowledge, opinions, attitudes and behaviors among individuals and within communities.”² The Centers for Disease Control and Prevention (CDC) notes that young people are “uniquely susceptible” to these types of influences given

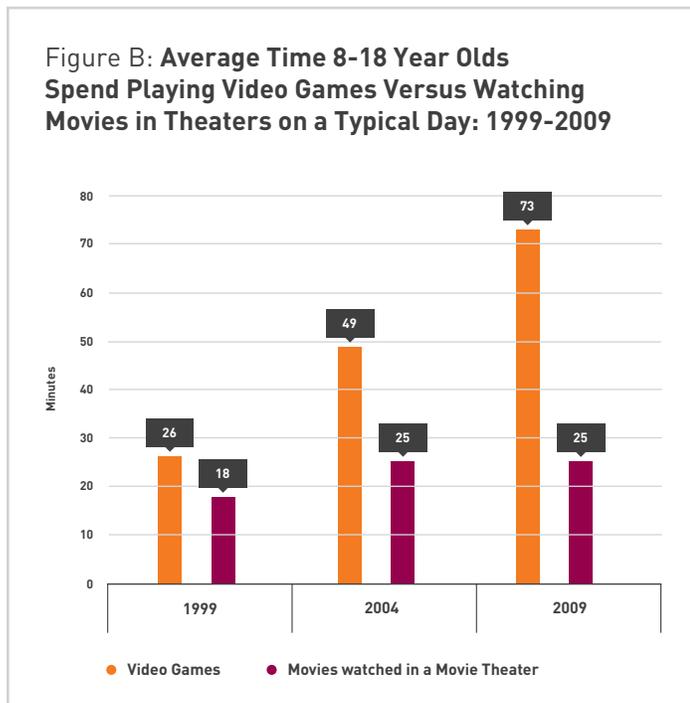


In the game “Starcraft II: Wings of Liberty,” a battlefield game rated “Teen,” three of the 13 soldiers that a player can select smoke.

their stage of development.³ Narratives in entertainment media are persuasive and “provide role models for behaviors, create attitudes and beliefs consistent with the message and generate empathy.”² While the important issue of violence in video games is well-known, few adults may realize how many of the story lines feature tobacco use. These narratives contribute to the perception that smoking is common, and research has found that youth who perceive smoking to be common in media are more likely to smoke.⁴

Advertising is also a key factor in youth tobacco use initiation.³ The depiction of tobacco use in games serves, in effect, as both free advertising for tobacco companies and a way to recruit the “replacement smokers” they need to make up for the 1,300 people who die each day from a tobacco-related disease.^{5,6}

While more research is needed on the particular question of the impact of tobacco use in video games on youth smoking rates, there is a robust body of research demonstrating that exposure to smoking in movies increases the likelihood that a young person will begin to smoke.⁷ In fact, 44 percent of adolescents who start smoking do so because of smoking images they have seen in movies.⁸ The relationship between smoking in movies and youth smoking behavior raises the strong prospect that smoking in video games has a similar influence. This is troubling, since youth spend considerably more time on average playing video games than watching movies in theaters (Figure B).⁹ The 2015 Common Sense Census also found a dramatic difference between time spent playing video games and time spent going to the movies. For example, teens overall spend an average of one hour and 21 minutes playing games per day, which is more than 25 times greater than the amount of time spent going to the movies.¹



Source: Kaiser Family Foundation, *Generation M2: Media in the Lives of 8-18 Year Olds*. 2010.

WHAT WE KNOW

There is a lot still to be learned about smoking and video games. But we know enough to have serious, well-based concerns. As we will discuss, tobacco products are prevalent in video games, used by the “cool” characters and sometimes by the players themselves in the virtual world of the game, and are often not reflected in a game’s rating.

“**Yeah, I’ve noticed it in a ton of video games that people are always like smoking cigarettes or cigars or something like that.**”
- Male, 15 to 17 years old

First, tobacco use is widespread in video games played by youth. A 2012 study found a steady increase, over the past decade, in tobacco content in video games rated appropriate for kids as young as 10 years old. For example, of all new games introduced in 2011 that were rated “Everyone 10+” (content generally suitable for ages 10 and up), 12.6 percent featured tobacco. The same study found that between 1994 and 2011, 60 out of 78 large publishers included tobacco imagery in at least one, and often more, of their games rated appropriate for youth.¹⁰

For example, “Overwatch” is one of the most popular games released in 2016, with the *Los Angeles Times* reporting that more than 15 million people played the game in the first three months of its release.¹¹ The “Teen”-rated game, which centers its action on an international band of heroes fighting to “restore peace to a war-torn world,” features tobacco in the form of a main character who is regularly shown smoking a cigar.¹² The character, who is one of “Overwatch’s” heroes, is described as a 37-year-old bounty hunter and outlaw who “came to believe that he could make amends for his past sins by righting the injustices of the world” and who “fights only for causes he believes are just,” according to the game’s publisher Blizzard Entertainment.¹³ Another



The "Mature"-rated game "Mafia 3" features many images of tobacco, including fictional tobacco product ads, throughout the game.

example of tobacco in a "Teen"-rated game can be found in "XCOM 2," in which characters fight against an alien invasion. The ESRB notes in its rating summary for the game that "players can customize soldiers with accessories, including lit cigarettes and cigars."¹⁴ Overall, more than a dozen video games released so far this year include tobacco use, with at least five that are rated "Teen."

While other games with tobacco are rated "Mature" (content generally suitable for ages 17 and up), they are played by teenagers nationwide. In a survey of more than 9,000 youth and adults across the U.S., nearly 40 percent of gamers, aged 12 to 17, have played "Call of Duty: Black Ops," just one of several games in the "Call of Duty" franchise featuring smoking.^{15, 16} In addition to "Call of Duty," best-



"Call of Duty: Black Ops III," part of the best-selling game franchise "Call of Duty," is rated "Mature," but many teens under 18 report playing it.

selling game franchises "Grand Theft Auto" and "Halo" include characters smoking. More than 100 million copies of games from these three franchises featuring tobacco use have been sold. One "Mature"-rated game released in 2016, "Bioshock: The Collection," shows children smoking and includes a fictional cigarette brand.¹⁷

In 2016, Truth Initiative commissioned interviews with 351 teens aged 15 to 17, 91 percent of which reported playing video games at least one day per week. More than three-quarters of the teens said they would play games despite the characters using tobacco. Over half, however, said they would not recommend a game with tobacco use to a younger sibling or family member, suggesting that they realize the harm tobacco imagery in video games could cause.

In a series of interviews Truth Initiative commissioned in 2015 with 44 teen and young adult "gamers," all of them described having few restrictions from their parents on the types of video games they played growing up. They all recalled seeing smoking in games on a regular basis, and some remembered being exposed to smoking in video games when they were as young as 10 or 11 years old. Another study of U.S. adolescents found that nearly half (49.5 percent) reported that their parents allowed them to play "Mature"-rated games at least occasionally.¹⁸

Second, just as in the movies, tobacco use in video games is often presented in ways that are viewed as positive by youth. In the Truth Initiative video interviews, respondents described smoking characters as "cool," "badass," "tough" and "strong." Tobacco use was viewed as making a character "tougher" or "grittier." Sometimes, tobacco use is given objectively positive qualities in games. For example, in the game "Fallout: New Vegas," using chewing tobacco provides a player with increased perception and agility.¹⁹ In the best-selling "Assassin's Creed" series, players can purchase and sell tobacco for profit.^{20, 21} While participants in the interviews said they would not be influenced by video games to use tobacco, they universally believed that younger consumers, particularly those under the age of 15, would be influenced. In fact, many young adult respondents admitted that, when they were younger, viewing smoking in a video game made them want to smoke.

Third, unlike when people watch movies and merely observe tobacco being used, many games feature playable characters who smoke—simulating and rewarding smoking behavior for the player. In “Grand Theft Auto Online,” players can purchase a pack of cigarettes in the game and have their character smoke them.^{22, 23} In some games, players cannot even control whether their characters use tobacco. In “Call of Duty: Black Ops III,” released in November 2015, before the player even starts the game, the first interaction with the protagonist is to watch him or her smoke a cigar while cleaning a gun.²⁴



The main character in “Call of Duty: Black Ops III” cleans a gun while smoking a cigar.

Fourth, recent research shows that video game content descriptors often fail to mention tobacco use, making it difficult for parents to monitor games for tobacco imagery. In a 2015 University of California, San Francisco (UCSF) survey, researchers verified tobacco content in 42 percent of the video games that participants reported playing; however, only 8 percent of these games had received tobacco warnings from the ESRB.²⁵ In 2016, Truth Initiative surveyed parents and guardians about their awareness of smoking in video games targeted to and played by teens. The survey showed that 93 percent of parents were unaware of the findings of the 2015 UCSF survey. When they were made aware, more than 65 percent reported that they would not consciously buy their child or someone else’s child a video game that features characters smoking or includes tobacco content. They also said they would not give their child or someone else’s child money or a gift card to buy a video game that features characters smoking or includes tobacco content.

ESRB RATINGS: A SUMMARY

Created by the Entertainment Software Association in 1994, the ESRB is the gaming industry’s self-regulatory organization that rates video games and apps.²⁶

The ESRB assigns ratings, such as “Everyone,” “Teen” and “Mature,” to video games. It also provides descriptions of the content that factored into each game’s rating and interactive elements. The content descriptors are “not intended to be a complete listing of content.”

The ESRB uses two different rating processes depending on the game’s platform—meaning packaged/boxed games or digitally delivered games:

1. For packaged/boxed video games, publishers provide information to the ESRB prior to a game’s release regarding “pertinent content, which essentially translates to anything that may factor into the game’s rating,” including the “most extreme content in the game.” Pertinent content also includes “other relevant factors such as context, reward systems and the degree of player control.” In addition, publishers provide the ESRB with a DVD, including the pertinent content. A committee of at least three ESRB-trained raters, individuals with no ties to the video game industry, reviews the submission and recommends a rating and content descriptors. The ESRB reviews the recommendation and finalizes the rating. After the game is released, ESRB staff “play-tests a variety of games” to verify that the content disclosure was accurate and complete.
2. For digitally delivered games, publishers complete a questionnaire regarding content and interactive components. The rating is generated by an automated process based upon the responses to the questionnaire.

Source: For a full description of the ratings process, visit ESRB. http://www.esrb.org/ratings/ratings_process.aspx

GAPS IN KNOWLEDGE

While we know that tobacco use is frequently depicted in video games, we do not know the precise extent of such depictions; a methodical review of games on the U.S. market has yet to be conducted.²⁷ A 2012 paper on the prevalence of tobacco in games found a significant increase in tobacco content since 2005 in games rated for young adolescents, but its conclusions were based on analyzing information from the ESRB, which has been shown to substantially underreport tobacco imagery.²⁸ Better data need to be collected on the prevalence of smoking in video games.

We also need to learn more about the relationship between playing video games and smoking, particularly among U.S. adolescents. A 2015 survey found that 26 percent of males and 22 percent of females between the ages of 18 to 24 who play games, also bought cigarettes, but we do not know if or how their smoking behavior is influenced by the games they play.²⁹ While some studies have found a correlation between video game playing and tobacco use, the results are not consistent across studies.^{30, 31} A recent online survey of adults found video game playing to be more prevalent among smokers, and it also found that smokers reported playing video games more recently and for longer durations.³² A study of Dutch secondary school students found that boys who used marijuana, tobacco and alcohol were nearly twice as likely to report problematic (i.e., excessive or addictive) video gaming, but did not find a relationship between non-problematic game playing and smoking.³³ A 2011 study of adolescents in California also had mixed results, with video game playing on weekdays positively correlated with tobacco use, but video game playing on weekends negatively correlated.³⁴ Two other studies found no relationship between tobacco and video game use.^{35, 36}



The ESRB rating summary for "The Wolf Among Us," rated "Mature," states that the "central character is persistently depicted smoking cigarettes, and some sequences allow players to control whether to share these cigarettes with others."

While we need to better understand whether playing video games featuring tobacco increases the likelihood that a person will begin to smoke, the large body of research on smoking in the movies has established a link between exposure and youth uptake based on research conducted across 14 different countries.³⁷ In addition, the advanced graphics, sounds and plots of modern video games make playing them even more engaging and interactive than watching a movie. Even gamers themselves opined in the Truth Initiative interviews that smoking in video games likely influences young people to smoke.

More research, such as a properly designed longitudinal study to measure changes in behavior over time and control for confounding factors, such as race, ethnicity, gender and income, could shed light on the relationship between exposure to tobacco imagery in video games and tobacco use behavior.

ACTION NEEDED

The current state of knowledge about tobacco use in video games allows us to call for the following steps. Taken together, they will reduce the risk that our kids could be influenced by video games to use tobacco:

- **The ESRB should consistently identify and disclose if any game contains tobacco use or tobacco references.** We also support the World Health Organization Framework Convention on Tobacco Control guidelines which recommend “a ratings or classification system that takes into account the depiction of tobacco products, use or images in rating or classifying entertainment media products (for example, requiring adult ratings which restrict access of minors), and that ensures that entertainment media aimed at children (including cartoons) do not depict tobacco products, use or imagery.”³⁸
- **Game developers and publishers should stop including tobacco use and tobacco images in their games, particularly those marketed to or played by youth, regardless of their ESRB rating.** Given what we know about the effects of smoking in the movies on youth initiation, they should take this step immediately.
- **Parents and adults should recognize that many video games contain tobacco use and be aware that ESRB content descriptors may fail to mention tobacco content, even when it is present in a game.** We strongly encourage parents and other adults to take this into consideration when purchasing games for tweens and teens.
- **Public health advocates should build public and stakeholder awareness about the issue of tobacco use in video games and support research to learn more about its implications.** The public health community should also insist that game developers eliminate tobacco content in video games. Research suggests that pressure on film producers has succeeded in decreasing tobacco imagery in youth-rated movies, and the same efforts should be used to influence game developers and publishers.^{39, 40}
- **Public health researchers should conduct more studies of the relationship between video games and tobacco,** including longitudinal studies that can help shed light on the question of whether exposure to tobacco use in video games leads to increased use or facilitates progression to regular use of tobacco.
- **Policymakers should recognize that the prevalence of tobacco use in video games may undermine public health gains in the reduction of youth tobacco use.** Indeed, some research suggests that tobacco content in video games suitable for youth increased during the period of time that tobacco decreased in movies.⁴¹ They should encourage responsible industry practices. Government agencies, such as the Centers for Disease Control and Prevention, Food and Drug Administration and National Institutes of Health, should undertake in-depth research on the impact of tobacco use imagery in entertainment media, including video games.

REFERENCES

- ¹ Common Sense. The Common Sense Census: Media Use by Tweens and Teens. 2015
- ² National Cancer Institute. The Role of Media in Promoting and Reducing Tobacco Use. U.S. Department of Health and Human Services, National Institutes of Health; 2012.
- ³ U.S. Department of Health and Human Services. Preventing tobacco use among youth and young adults: A report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.
- ⁴ Ibid.
- ⁵ Burrows DS. Strategic Research report. Younger Adult Smokers: Strategies and opportunities. Truth Tobacco Industry Documents. RJ Reynolds. February 29, 1984. Bates No: 508783540.
- ⁶ U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014. Printed with corrections, January 2014.
- ⁷ Forsyth SR, Malone RE (2015). Smoking in video games: A systematic review. *Nicotine Tob Res*, published online July 25, 2015, doi:10.1093/ntr/ntv160.
- ⁸ Millett C, Glantz SA (2010). Assigning an 18 rating to tobacco imagery is essential to reduce youth smoking [editorial]. *Thorax*, 65:377-378.
- ⁹ Kaiser Family Foundation. Generation M2: Media in the Lives of 8-to 18-Year-Olds. 2010.
- ¹⁰ Barrientos-Gutierrez T, Barrientos-Gutierrez I, Lazcano-Ponce E, Thrasher JF. Tobacco content in video games: 1994–2011. *Lancet Oncol* 2012 March;13(3):237-8.
- ¹¹ Dave, Paresh. "Records-shattering Release of 'Overwatch' Leads Big Quarter for Activision Blizzard." *Los Angeles Times*. N.p., 4 Aug. 2016. Web. <<http://www.latimes.com/business/technology/la-fi-tn-activision-earnings-overwatch-20160804-snap-story.html>>
- ¹² Entertainment Software Rating Board. Overwatch ratings synopsis. Available at <http://www.esrb.org/ratings/Synopsis.aspx?Certificate=34210&Title=Overwatch>.
- ¹³ Blizzard Entertainment, n.d. Web. < <https://playoverwatch.com/en-us/heroes/mccree/>>
- ¹⁴ Entertainment Software Rating Board. XCOM 2 ratings synopsis. Available at <http://www.esrb.org/ratings/Synopsis.aspx?Certificate=34509&Title=XCOM+2>.
- ¹⁵ Interpret. New Media Measure®. Data from 2012 Q3.
- ¹⁶ Common Sense Media. Game reviews: Call of Duty: Black Ops. Available at <https://www.common sense media.org/game-reviews/call-of-duty-black-ops>.
- ¹⁷ Entertainment Software Rating Board. BioShock: The Collection ratings synopsis. Available at <http://www.esrb.org/ratings/Synopsis.aspx?Certificate=34381&Title=BioShock%3a+The+Collection>.
- ¹⁸ Hull JG, Brunelle TJ, Prescott AT, Sargent JD. A longitudinal study of risk-glorifying video games and behavioral deviance. *J of Pers and Soc Psych* 2014, Vol. 107, No.2, 300–325.
- ¹⁹ Fallout Wiki. Available at http://fallout.wikia.com/wiki/Coyote_tobacco_chew [accessed November 12, 2015].
- ²⁰ Trade Assassin's Creed: Liberation HD Game Guide. Available at <http://guides.gamepressure.com/assassinscreedliberationhd/guide.asp?ID=23679> [accessed November 4, 2015].
- ²¹ How to Make More Money in Assassin's Creed Rogue: Sell tobacco, renovate buildings and capture Gang HQs in this thriving economy. Available at <http://www.primagames.com/games/assassins-creed-rogue/tips/how-make-more-money-assassinscreed-rogue> [accessed November 4, 2015].
- ²² GTA Wiki. Smoking. <http://gta.wikia.com/wiki/Smoking> [accessed November 11, 2015]
- ²³ GTA Wiki. Redwood Cigarettes. http://gta.wikia.com/wiki/Redwood_Cigarettes [accessed November 11, 2015].
- ²⁴ Infinity Ward. Call of Duty: Black Ops III.
- ²⁵ Forsyth SR, Malone RE. Tobacco imagery in video games: ratings and gamer recall. *Tob Control*. September 14, 2015, doi: 10.1136/tobaccocontrol-2015-052286.
- ²⁶ Entertainment Software Rating Board. About ESRB. Available at <http://www.esrb.org/about/>.

REFERENCES CONT.

- ²⁷ Barrientos-Gutierrez T, Barrientos-Gutierrez I, Lazcano-Ponce E, Thrasher JF. Tobacco content in video games: 1994–2011. *Lancet Oncol* 2012 March;13(3):237–8.
- ²⁸ Ibid.
- ²⁹ Interpret. New Media Measure®. Data from 2015 Q1.
- ³⁰ Hull JG, Brunelle TJ, Prescott AT, Sargent JD. A longitudinal study of risk-glorifying video games and behavioral deviance. *J of Pers and Soc Psych* 2014, Vol. 107, No. 2, 300–325.
- ³¹ Forsyth SR, Malone RE (2015). Smoking in video games: A systematic review. *Nicotine Tob Res*, published online July 25, 2015, doi:10.1093/ntr/ntv160.
- ³² Raiff BR, Jarvis BP, Rapoza D. Prevalence of video game use, cigarette smoking, and acceptability of a video game-based smoking cessation intervention among online adults. *Nicotine Tob Res* 2012; 14, 1453–1457.
- ³³ Van Rooij AJ, et al. The (co-)occurrence of problematic video gaming, substance use, and psychosocial problems in adolescents. *J of Behavioral Addictions* 2014; 3(3), 157–165.
- ³⁴ Shi L, Mao Y. Weekend television viewing and video gaming are associated with less adolescent smoking. *J of Substance Use*, April 2011; 16(2): 109–115.
- ³⁵ Walther B, Morgenstern M, Hanewinkel R. Co-occurrence of addictive behaviours: personality factors related to substance use, gambling and computer gaming. *Eur Addict Res* 2012;18, 167–174.
- ³⁶ McClure RF, Mears FG. Video game playing and psychopathology. *Psychol Rep* 1986, 59, 59–62.
- ³⁷ World Health Organization. *Smoke-Free Movies: from evidence to action*. 3rd edition. 2015.
- ³⁸ World Health Organization. *Guidelines for implementation for article 13 of the WHO framework convention on tobacco control*. 2009.
- ³⁹ Glantz SA, Mitchell S, Titus K, et al. Smoking in top-grossing movies. *MMWR Morb Mortal Wkly Rep* 2011;60:909e13.
- ⁴⁰ Thrasher JF, Sargent JD, Vargas R, Braun S, Barrientos-Gutierrez T, Sevigny EL, Billings DL, Arillo-Santillan E, Hardin J. Are movies with tobacco, alcohol, drugs, sex, and violence rated for youth?: A comparison of rating systems in Argentina, Brazil, Mexico, and the United States. *International Journal of Drug Policy*. 25: 267–275. 2014.
- ⁴¹ Barrientos-Gutierrez T, Barrientos-Gutierrez I, Lazcano-Ponce E, Thrasher JF. Tobacco content in video games: 1994–2011. *Lancet Oncol* 2012 March;13(3):237–8.