Research on
Computer and Video Game Addiction

Research on Computer and video game addiction

Content

No	Author(s)	Year	Source	Sort of study - Aim	Title
D1	Charlton, J.P.; Danforth, I.D.W.	2006	Computers in Human Behavior, article in Press	Correlation study – uses factor analysis to analyze responses in an online survey of MMORPG-players	Distinguishing **addictio**n and high engagement in the context of online game playing
D 2	Chiu, S.I.; Lee, J.Z.; Huang, D.H.	2004	CyberPsychology and Behavior, Vol 7 (5) Oct 2004, 571-581	Correlation study – variables related to video game addiction such as social skills, family environment, etc.	**Video Game Addiction** in Children and Teenagers in Taiwan.
D 3	Chou, T-J.; Ting, C.C.	2003	CyberPsychology and Behavior, Vol 6 (6), 663-675	Correlation study	The role of Flow Experience in Cyber-Game **Addiction**
D 4	Cypra, O.	2005	http://www.mmorpg-research.de	Correlation study – self perception of people's gaming habits, relationship between real and virtual world, **dependency**	Why do people play in virtual worlds? An empirical study of online role play games and their users
D 5	Egli, E.A.; Meyers, L.S.	1984	Bulletin of the Psychonomic Society, Vol 22 (4) Jul 1984, 309-312	Correlation study – role of video games in relation to other leisure activities and academic performance in a group of arcade customers	The role of video game playing in adolescent life: Is there reason to be concerned?
D 6	Eidenbenz, F.	2004	Suchtmagazin, 1 : 3-12	Discussion	Online between fascination and **addiction** [*Online zwischen Faszination und Sucht*]

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D 7	Estallo, M.J.A.	1994	Psicothema, Vol 6(2) July 1994, 181-190	Correlation study - comparing personality traits of frequent and infrequent videogame players	Video games, personality, and behavior [*Videojuegos, Personalidad y Conducta]*
D 8	Feng, Y., Yan, X., Guo, X. Et al	2003	Chinese Mental Health Journal, 2003 Jun; Vol. 17 (6): 367-368	Correlation study – Comparison between children with and without video game dependence	Behavior problem and family environment of children with **video game dependence**
D 9	Fisher, S.	1994	Addictive Behaviors, Vol 19 (5) Sep-Oct 1994, 545-553	Assessing a scale diagnosing "video game addiction"	Identifying **video game addiction** in children and adolescents.
D 10	Fritz,J.; Höne-mann,H.;Misek-Schneider, K; Ohnemüller, B.	1997	„Handbuch Medien: Computerspiele"; Bundeszentrale für politische Bildung, ISBN 3-89331-302-8	Correlation study - using psychological tests and half-structured interviews.	High frequency computer gamer
D 11	Griffiths, M.D.	2005	Psychological Reports, Vol 96 (3) Jun 2005, 644-646	Discussion about communalities between gambling and video game playing	Relationship Between Gambling and **Video-game Playing**: A Response to Johansson and Gotestam.
D 12	Griffiths, M.D.; Davies, M.N.O.	2005	Raessens, J.; Goldstein, J. (Eds.) Handbook of Computer game studies, pp 359 – 369, Boston: MIT Press	Discussion	Does Video **game addiction** exist?
D 13	Griffiths, M.D.; Davies, M.N.; Chappell, D.	2004	Cyberpsychology & Behavior, Vol. 7 (4), p: 479-87	Correlation study - investigates playing patterns and demographic factors	Demographic factors and playing variables in online computer gaming
D 14	Griffiths, M.D.; Davies, M.N.; Chappell, D.	*2003*	Cyberpsychology & Behavior, 6: 81-91	Correlation study	Breaking the stereotype: the case of online gaming

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D 15	Griffiths M.D.; Davies M.N.; Chappell D.	2002	Journal of Computer Assisted Learning, 18, 379-381	Reasons are outlined for why characteristics of online players have been studied in a current research project	**Excessive online gam**ing: Implications for education
D 16	Griffiths, MD..; Wood, R.T.A	2000	Journal of Gambling Studies, Vol 16 (2-3) Fal 2000, 199-225	Discussion – discusses three risk areas, interrelates them and reviews current scientific status	Risk factors in adolescence: The case of gambling, **videogame playing**, and the Internet.
D 17	Griffiths, M.D.; Hunt, N.	1998	Psychological Reports, Vol 82 (2): 475-480	Correlation / prevalence study	**Dependence on computer game playing** in adolescents
D 18	Griffiths, M.D.	1997	British Journal of Clinical Psychology, 36: 639 – 641	Reference library on clinical practice	Video games and clinical practice: Issues, uses and treatment
D 19	Griffiths, M.D.; Dancaster I.	1995	Addictive Behaviors, 1995 Jul-Aug; Vol 20(4): 543-548	Experimental study	The effect of Type A personality on physiological arousal while playing computer games
D 20	Griffiths, M.D.	1995	Clinical Psychology Forum, 76; 14-19	Discussion	Technological **Addictions**
D 21	Griffiths, M.D.	1994	Clinical Psychology Forum, 68: 25-28	Discussion	Computer games and clinical psychology: Issues of concern
D 22	Griffiths, M.D:	1991	Journal of Adolescence, 14, 53-73	Discussion – Analysis of communalities. Potential for addiction is only briefly discussed	Amusement machines playing in childhood and Adolescence: A comparative analysis of video game addiction

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D 23	Grüsser S.M.; Thalemann, R.; Albrecht, U.; Thalemann, C.	2005	Wiener Klinische Wochenschrift. Vol. 117 (5-6), p: 188-95	Prevalence study	Excessive computer usage in adolescents - results of a psychometric evaluation
D 24	Johansson, A.; Gotestam, K.G.	2004	Psychological Reports, Vol 95 (2) Oct 2004, 641-650.	Prevalence study	Problems with **computer games** without monetary reward: Similarity to pathological gambling.
D 25	Keepers, G.	1990	Journal of the American Academy of Child and Adolescent Psychiatry, Vol 29 (1) Jan 1990, 49-50	Clinical case study	A **pathological preoccupation with video games.**
D 26	Klein, M.H.	1984	Journal of Psychohistory, Vol 11(3) Win, 395-401	Discussion	The bite of Pac-Man
D 27	Ko, C.H.; Yen, J. Y.; Chen, C.C.; Chen, S.H.; Yen, C.F.	2005	Journal of Nervous and Mental Disease, Vol 193 (4) Apr 2005, 273-277.	Correlation study - evaluates gender and other factors to predict the severity of online gaming addiction	Gender Differences and Related Factors Affecting **Online Gaming Addiction** Among Taiwanese Adolescents.
D 28	Kuczmierczyk, A. R; Walley, P.B; Calhoun, K.S.	1987	Scandinavian Journal of Behaviour Therapy, Vol 16(4), 185-190	Clinical case study	Relaxation training, in vivo exposure and response-prevention in the treatment of compulsive video-game playing
D 29	Lo, S.K.; Wang, C.C.; Fang, W.	2005	Cyberpsychology & Behavior, Vol. 8 (1), 15-20	Correlation study - quality of interpersonal relationships and levels of social anxiety	Physical interpersonal relationships and social anxiety among online game players.
D 30	McClure R.F.; Mears F.G.	1984	Psychological Reports, 1984 Aug; Vol 55 (1): 271-276	Correlation study– personality and demographic variables associated with frequent videogame use	Video game players: Personality characteristics and demographic variables.

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D 31	McClure, R.F.; Mears F.G.	1986	Psychological Reports, 1986 Aug; Vol 59 (1): 59-62	Correlation study - comparing personality traits of frequent and infrequent players	Videogame playing and psychopathology
D 32	Ng, B.D.; Wiemer-Hastings, P.	2005	CyberPsychology and Behavior, Vol 8 (2) Apr 2005, 110-113	Correlation study - compares online MMORPG and offline video game user	Addiction to the Internet and Online Gaming
D 33	Petry, J.	2003	In: Ott, R.; Eichenberger, C. (Hrsg.) Klinische Psychologie im Internet. Hogrefe, Göttingen, S. 257-267	Clinical case studies – path. gaming, chatting and surfing are presented, classification aspects discussed	Pathological use of personal computers: Classification and case studies
D 34	Phillips, C.A.; Rolls, S.; Rouse, A.; Griffiths, M.D.	1995	Journal of Adolescence, Vol 18(6) Dec 1995, 687-691	Prevalence and correlation study in a sample of 11-16 yr old children.	Home video game playing in schoolchildren: A study of incidence and patterns of play.
D 35	Sattar, P.; Ramaswamy, S.	2004	Canadian Journal of Psychiatry, Vol 49 (12) Dec 2004, 871-872	Clinical case study	Internet **Gaming Addiction**.
D 36	Shotton, M.	1989	Book published by: London: Taylor and Francis	Correlation study with follow up	Computer addiction? A study of computer dependency
D 37	Soper, W.B.; Miller, M.J.	1983	School Counselor, Vol 31 (1) Sep 1983, 40-43	Discussion	Junk-time junkies: An emerging **addiction** among students.
D 38	Sorensen, E.	2005	Psyke and Logos, Vol 26(1) 2005, 137-152	Correlation study	Addiction to online games? When children and adolescents play too much

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D 39	Suler, J.	2004	International Journal of Applied Psychoanalytic Studies, Vol 1 (4) 2004, 359 –362	Discussion	Computer and Cyberspace "**Addiction**".
D 40	Tazawa.Y; Okada, K.	2001	Pediatrics international: official journal of the Japan Pediatric Society, Vol. 43 (6), p: 647-50	Correlation study	Physical signs associated with **excessive television-game**: playing and sleep deprivation.
D 41	Salguero, R. A.; Tejeiro; Moran, R. M. Bersabe	2002	Addiction, Vol 97 (12) Dec 2002, 1601-1606	Scale assessment	Measuring **problem video game playing** in adolescents
D 42	Tejeiro, R.	2001	Adicciones, Vol 13 (4) 2001, 407-413	Literature review	**Video games addiction**: A review
D 43	Thalemann, R.; Grüsser, S.M.	2005	35th Annual Meeting of the Society for Neurosciences, Washington	Experimental study	Psycho-physiological characterization of excessive computer game play
D 44	Thalemann,R., Albrecht, U., Thalemann,C., Grüsser, S.M,	2004	Psychomed, 16: 226-223	Scale Assessment - assessing a scale that measures problematic computer game behavior in children	Questionnaire for computer game behavior in children (CSVK); short description and psychometric variables
D 45	Wood, R.; Gupta,R.; Derevensky, J. Griffiths, M.	2004	Journal of Child and Adolescent Substance Abuse, Vol 14 (1) 2004, 77-100.	Cross sectional study - comparing video game playing and gambling behavior	**Video Game Playing** and Gambling in Adolescents: Common Risk Factors
D 46	Yang, Z.	2005	Chinese Journal of Clinical Psychology, Vol 13 (2) May 2005, 182, 192-193.	Correlation study – examining the relation of video game addiction and life events	Research on the Correlation between Life Events and **Video Game Addiction** in Junior Middle School Students.

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D 1
Author(s): Charlton, J.P.; Danforth, I.D.W.
University: University of Bolton, Department of Psychology and Life Sciences, Bolton, USA; Department of Psychology, Whitman College, Walla Walla, USA
Title: Distinguishing addiction and high engagement in the context of online game playing
Source: Computers in Human Behavior, article in Press
Sort of study: Correlation study
Sample: Massively Multiplayer Online Game Players, (N = 442)
Aims: Examines whether a distinction between core and peripheral criteria for behavioral addiction apply in the area of Massively Multiplayer Online Game (MMOPG).
Approach: Online questionnaire
Results:

- Findings of factor analysis confirmed a distinction between a factor loading on "pathological" core criteria (such as conflict, withdrawal symptoms, relapse, reinstatement, behavioral salience) and a non-pathological "engagement factor" loading on peripheral criteria (such as cognitive salience, tolerance and euphoria).
   - As shown by analysis of frequencies peripheral criteria are met before core criteria, suggesting a process of developing.
   - Those endorsing only the peripheral criteria spent significantly less time playing MMORPG.
   - The necessity to rework previously used criteria for addiction in the area of computer related addiction is discussed.

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D 2
Author(s): Chiu, S. I.; Lee, J. Z.; Huang, D. H.
University: 79-9 Sha-Luen-Hu Xi-Ehou Li Houloung Town, Miaoli City, Taiwan. shaoi.chiu@msa.hinet.net
Title: Video Game Addiction in Children and Teenagers in Taiwan.
Source: CyberPsychology and Behavior. Vol 7 (5) Oct 2004, 571-581.
Sort of Study: Correlation study
Sample: Students from grade 5-8 (N = 1,228), Northern Taiwan
Aims: To explore variables related to video game addiction in children and teenagers.
Approach: Students completed a questionnaire that alongside to demographic information included scales concerning sensation seeking, boredom inclination, game addiction, game activity, animosity, social skills and family background.
Results: Various variables were related to video game addiction in Taiwanese children and teenagers: - Males demonstrated higher degrees of video game addiction than females. - Video game addiction and gender were found to effect prediction of academic achievement. - Poor family function, tendency towards sensation seeking and inclination to boredom were significantly related to higher scores on the game addiction scale. - Subjects with a stronger game addiction inclination demonstrated higher animosity.

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D 3	
Author(s): Chou, T-J.; Ting, C.C.	
University: School of Marketing University of South Australia, Adelaide, Australia. Ting-Jui.Chou@unisa.edu.au Department of Marketing and Distribution Management, National Kaoshing First University of Science and Technology, Taiwan	
Title: The role of Flow Experience in Cyber-Game Addiction	
Source: CyberPsychology and Behavior, Vol 6 (6), 2003, 663-675	
Sort of study: Correlation study	
Sample: Online-gamer (members of virtual communities were invited to participate via email) (N = 395)	
Aims: Use flow theory to bridge the gap between two concepts of addiction: Economists understand addiction as a perfectly rational behavior whereas psychiatrists consider addictive behavior as something that starts with a rational decision and ends up in irrational and disastrous outcomes.	
Approach: Web-based survey.	
Results: - Results revealed that both repetition and flow experience affect addictive behavior. However repetition on its own may not be a sufficient condition of addiction ("rational addiction"). Findings suggest that a habit formation process and addiction results when behavioral repetition triggers flow.	

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D 4	
Author(s): Cypra, O.	
University: University of Mainz, Department for Sociology, Germany. Olgierd.Cypra@uni-mainz.de	
Title: Why do people play in virtual worlds? An empirical study of online-role-games and their users. [*Warum spielen Menschen in virtuellen Welten. Eine empirische Untersuchung zu Online-Rollenspielen und ihren Nutzern*]	
Source: http://www.mmorpg-research.de , results published 2005	
Sort of study: Correlation study	
Sample: (N = 11,442)	
Aims: To explore MMORPG user characteristics such as demographics, gaming habits, importance of real life and game related relationships, dependence, gender swap and control and mastership.	
Approach: Online survey advertised on different MMORPG websites, fan sites and via email invitations (e.g. gilds leader)	

Results:

- Respondents were mainly male (females only 10 %), of relatively young age (average age of 22,5 yrs), above averagely educated with a big proportion considering themselves to be middle class.
- On average they played 20 hours per week. 65%, classified as "Normal Gamer" (NG), played up to 29 hrs, 30%, classified as "High Frequency Gamer" (HFG), spent up to 59 hrs online gaming, and 5%, classified as "Hardcore Gamer" (HG) played up to 60 hrs per week.
- The larger the amount of time spent playing MMORPG, the higher the ratio of females and unemployed people and the bigger the proportion of poorly educated users and those, discontent with their lives.
- 23 % of HG admit compensating for "real world deficits" – such as loneliness, low self-esteem, etc.- with gaming (NG 6%; HFG 10%).
- For all types of gamer real life relations were more important than virtual relationships. However, for NG virtual life relationships were significantly less important than for HG.
- Nine out of ten respondents agreed with the statement that MMORPG can be addictive and 20% consider themselves as addicted to the game. But according to ICD-10 criteria of addiction only 5% of all respondents can be rated as "truly addicted".
- Amongst those that demonstrate stronger signs of addiction high percentage of users that are unemployed, poorly educated and discontent with their lives can be identified.

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D 5
Author(s): Egli, E.A.; Meyers, L.S.
University: University of Minnesota, Minneapolis, USA
Title: The role of video game playing in adolescent life: Is there reason to be concerned?
Sources: Bulletin of the Psychonomic Society. Vol 22(4) Jul 1984, 309-312
Sort of study: Correlation study
Sample: 10 – 20 years old (N = 151), customers of three different video game arcades
Aim: To investigate impact of video game playing on social and academic life
Approach: Subjects were approached in three different video game arcades and asked to complete a questionnaire asking about attitudes toward video game playing and their lives.
Results: - For the vast majority of subjects video game playing represented one spare time activity amongst various others. - Only for a subgroup of almost 10% was amount of time playing related to some compulsive aspects of playing although not to non-identifiable problems.

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D 6
Author(s): Eidenbenz, F.
Institution: Sozialpsychologische Beratungsstelle Offene Tür, Zurich, Switzerland
Title: Online between fascination and addiction [*Online zwischen Faszination und Sucht*]
Source: SuchtMagazin. 1: 3-12 (2004)
Sort of article: Discussion and correlation study (2001)
Discussion: Through the spread of the Internet and mobile phone use over the last decade possibilities to communicate and to gather information have exploded. Alongside the abuse that exists among web-site providers that offer critical content, abuse also exists among consumers. Preferred areas of excessive use are sex and chat sites, and online games. The author discusses the special features that - for a subgroup of users - make these virtual platforms more preferable than their real counterparts. The author – a counselor and therapist – also reports on his experience with online addicts, the dynamic of the addiction, common background variables, treatment and prevention.
Sort of sample: Students aged form 12 to 16 years (N = 866)
Sort of study: Prevalence and correlation study
Aims: To investigate internet use in Switzerland among adolescents (2001)
Approach: A questionnaire was developed containing 116 items referring to typical criteria of non-substance addictions.
Results: - 85% had online access and a small minority of students (6%) reported being online more than 20 hours per week. - On average they spent 41 minutes a day on the internet (range from 5 minutes to 7 hours). - One quarter used the internet to play online games, and another quarter used the internet for chatting. Half of the students used the internet for research.

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D 7
Author(s): Estallo, M.; Juan A.
University: Inst Psiquiatric, Barcelona, Spain
Title: Video games, personality, and behavior [*Videojuegos, Personalidad y Conducta*]
Source: Psicothema. Vol 6 (2) July 1994, 181-190.
Sort of Study: Correlation study
Sample: Children, adolescents, and adults (aged 12 -33 yrs) (N = 248)
Aims: Personality traits of frequent versus infrequent videogame players were compared.
Approach: Subjects completed a questionnaire.
Variables correlated: - Age   - Eysenck Personality Questionnaire   - Antisocial Behavior Scale (Allsopp and Feldman, 1976)   - Delinquent Behavior Scale (Allsopp and Feldman, 1976**)**   **-** Frequency of videogame playing   **-** Time invested in each game session   **-** Type of machine used   - Type of game played

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D 8
Author(s): Feng, Y., Yan, X., Guo, X. et al.
University: Xinxiang Medifal College, 2nd Affiliated Hospital, Department of Psychiatry, Xinxiang, China
Title: Behavior problem and family environment of children with video game dependence
Source: Chinese Mental Health Journal, 2003 Jun; Vol. 17 (6): 367-368
Independent variables: Children with versus without video game dependence
Variables investigated: - Personality - Behavior problems - Mental health - Family environment.
Sort of Sample: Children/adolescents (aged 8-15). 34 with video game dependence, 34 without (control group) (N = 68)
Sort of study: Correlation study
Aim: Children with video game dependence were compared with those without in terms of mental health, behavior problems and family environment.
Approach: Study group (children with video game dependence) and control group (children without a video game dependence) completed following questionnaires - the EPQ, Eysenck Personality Questionnaire (children version), - the Achenbach Children's Behavior checklist (CBCL, for parents) - the Family Environment Scale (FES).
Results: - Children with video game dependence show more mental and behavioral problems than their normal control peers. Those problems are associated with their poor family environment. - In the study group scores of intimacy, emotional expression, entertainment action-reaction orientation, organization, and control of the FES were lower than the scores of control group.

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D 9
Author(s): Fisher, S.
University: University of Plymouth, Department of Applied Social Science, UK
Title: Behavior problem and family environment of children with video game dependence. Identifying video game addiction in children and adolescents.
Source: Addictive Behaviors. Vol 19 (5) Sep-Oct 1994, 545-553.
Sort of study: Scale assessment
Sample: 11-16 yr olds (N = 467)
Aims: Scale development with assessment of its reliability and factorial validity
Approach: A scale presented as the DSM-IV-JV (J = Juvenile, V = arcade video game) was developed to assesses problematic arcade video game playing. It comprises 9 dimension was derived from the DSM-IV.
Results: - Psychometric assessment proves that the DSM-IV-JV provides reliable internal consistency and factorial validity. - Validity is also supported by the significant relationship between scores and alternative means of excessive video game play. - Results suggest that the scale is represented by two factors. These findings suggest that arcade video game addiction might be characterized by an overwhelming need to play arcade video games and negative emotions and behavior afterwards.

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D 10
Author(s): Fritz, J.; Hönemenn, H.; Misek-Schneider, K.; Ohnemüller, B.
University: University for Applied Sciences, Cologne, Germany
Title: High frequency computer gamer [Original title: *Vielspieler am Computer*] (study conducted in 1994/95)
Source: In „Handbuch Medien: Computerspiele". Bundeszentrale für politische Bildung (1997). S. 197-205
Sort of study: Correlation study (using also qualitative half-structured interviews)
Sample: High frequency computer gamers, aged between 14 - 33 yrs (N = 104), self selected through advertising in game shops, game magazines, youth centers.
Aims: To identify the most important characteristics of high frequency computer gamers
Approach: a) Diagnostic instruments used: IIP- Inventory to assess interpersonal problems, SLC 90 R– Symptom Check List; FKK – Questionnaire to assess person's belief in their competency and self efficacy b) Interview content analysis: reasons to play, preferences, motivation, emotional experience and impact, relations between game themes and real life, social aspect of gaming, other leisure time activities.

Results:
   Sample description:
- 91 % of the sample were male with a mean age of 19-20. The vast majority came from formally functioning middle class families. Educational levels of qualification were higher than average. They reported pursuing a variety of hobbies, with sport being the most popular amongst them.
   Results of psychological tests
- No psychopathological abnormalities could be found HFCG in the sample that made them different to their norm group. They demonstrated high self confidence and a positive image of themselves, especially the ones that spent extreme amount of times gaming. No sign of addictive gaming or social withdrawal could be identified. They showed high levels of achievement orientation
   Results of interview content analysis
- Almost all gamers play in the search for success (97%). About half of the sample (47%) reported melting with the in-game reality and experiencing losing sense of time. Subjects who had experienced "melting with the game" showed a tendency to think that their life was determined by fate and not so much by themselves.
- Those gamers that did not think about strategies to solve in-game-problems afterwards (22%), demonstrated lower self confidence.

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D 11
Author(s): Griffiths, M.D.
University: International Gaming Research Unit, Psychology Division, Nottingham Trent University, UK mark.griffiths@ntu.ac.uk
Title: Relationship Between Gambling and Video-game Playing: A Response to Johansson and Gotestam.
Source: Psychological Reports. Vol 96 (3) Jun 2005, 644-646.
Sort of study: Discussion
This paper reviews the many similarities and commonalities between video-game playing and slot machine gambling in response to Johansson and Gotestam.

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D 12	
Author(s): Griffith, M.D.; Davies, M.N.O.	
University: International Gaming Research Unit, Psychology Division, Nottingham Trent University, UK mark.griffiths@ntu.ac.uk	
Title: Does video game addiction exist?	
Source: in "Handbook of Computer game studies", Raessens, J.; Goldstein, J. (Eds.); Boston: MIT Press (2005), pp 359-369	
Sort of article: Discussion	
Looks into debate about whether excessive computer game play can constitute a 'bona fide' addiction similar to that of substance related addiction. The authors suggest that despite sparse research evidence does exist to suggest that video games are at least potentially addictive and that video game addiction does affect a small minority of players. The potential for addiction may differ however according to type of game, game playing media, gender, age etc.	

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D 13
Author(s): Griffiths, M.D.; Davies, M.N.; Chappell, D.
University: Psychology Division, Nottingham Trent University, UK mark.griffiths@ntu.ac.uk
Title: Demographic factors and playing variables in online computer gaming
Source: Cyberpsychology & Behavior (2004), Vol. 7 (4), p: 479-87
Sort of study: Correlation study
Sample: People who play the online game "Everquest" (N = 540), self-selected sample
Aims: To gather primary information of online game player
Approach: Online questionnaire
Results: Demographic factors - 81 % of the "Everquest" gamers surveyed were male. Two thirds of the sample were between 18 and 30 yrs old. - "Everquest" is predominantly played by North Americans, 81 %. - 56 % of participants were single. A quarter reported playing the game with their partner. - 42% had been in higher education. Almost a third (28,7 %) were occupied in the IT and computing sector. 20% were students. Playing patterns - The mean time playing per week was 25 hours. 9.3% reported playing for 40 hours a week. - Only a small proportion played the game for more than 80 hours a week - For most gamers the most important aspect of the game was the social aspect. - Just about 20% did not sacrifice anything in order to play the "Everquest". 20% said that they sacrifice sleep in order to play the game.

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D 14
Author(s): Griffith, M.D.; Davies, M.N.O.; Chappell, D.
University: Nottingham Trent University, Psychology Division, Nottingham, UK
Title: Breaking the stereotype: the case of online gaming
Source: Cyberpsychology and Behavior, Vol 6. No 1 (2003) 81-91
Sort of study: Correlation study
Sample: People who play the online game "Everquest" and have provided information via one of two "Everquest"-fan sites (self selected sample). N = 11,457
Aims: To collect baseline information about people who play online computer games and upon which future research can be based.
Approach: Two "Everquest" fan sites conducted a poll once or twice every month. Data concerning socio-demographic variables, playing patterns and preferences for particular aspects and activities in the games were collected for secondary analysis.

Results:
 	
Socio-demographics
  - Age range of the sample was spread between the twenties and the thirties. On one fan site 60 % of respondents were over 19 while on the other site 72% were over 21.
  - 85% of the sample were male, 15% were female.
  - Approximately 50% had an undergraduate degree and a considerable subgroup was still studying.
 	
Playing patterns
  - A quarter played more than 41 hours a week. 15 % of the sample claimed to play more than 50 hours a week.
  - 61 % had been playing the game for a year or even less than a year.
  - 72 % engaged in role play at some point. 31 % played the game solo.
 	
Preferences
  - 41 % of all reported favorite aspects of the game had to do with social interaction. Killing mobs or other players only accounted for a total of 4% of favorite aspects.
  - 82 % of the least favorite aspect of the game focused on game mechanics or customer services.
  - Players were classified into three categories: 34% that group to play, 55% that play to group and 12 % that do not group.
  - 15% admitted gender swapping, while males engaged in gender swapping more often (17%) than females (10%)
  - 34% reported playing as "explorers", 22% as role players and 23% as "power levelers" (23%), who explore the mechanics of the game. 36% were socially focused.

D 15
Author(s): Griffiths, M.D.; Davies, M.D.; Chappell, D.
University: Department of Social Sciences, Nottingham Trent University. UK
Title: (*Research Note*) Excessive Online gaming: Implications for education
Source: Journal of Computer Assisted Learning (2002), 18, 379-381
Sort of Article: No study itself. Reasons are outlined why characteristics of online players are studied in a current research project.
Empirical information about normal and excessive online computer gaming is very limited due to the fact that only since relatively recently have most people had access to the Internet. Students who have ready access to the Internet and flexible time schedules are considered to be at high risk in terms of problem online gaming. Online games combine both, co-operative and competitive elements. Therefore they might be especially useful regarding education or, on the other hand, detrimental to educational activities. The goal of the current research project, which is limited to users of the game "Everquest", is to gather empirical information about the prevalence of online gaming addiction amongst its players.

D 16
Author(s): Griffiths, M.D.; Wood, R.T.A
University: Nottingham Trent University, Psychology Division, Nottingham, UK
Title: Risk factors in adolescence: The case of gambling, videogame playing, and the Internet.
Source: Journal of Gambling Studies. Vol 16 (2-3) Fal 2000, 199-225.
Sort of Study: Discussion
Sample: Adolescence
Aims: Risk factors in adolescence related to gambling, video game playing and Internet are put into an empirical perspective
Differences and communalities between video games and slot machines are outlined. These include structural characteristics, reinforcement schedules and the role of skill and luck. Several medical case studies can be found which report on the adverse effects of excessive video game play. Treatment here simply involves serious reduction of game play. Although the most popular argument against video game playing is its supposed addictive nature, only few empirical studies are concerned with it. Some more recent studies carried out by the author and colleagues reveal that a small subgroup of children play video games to an alarming extent (30 hours a week and more). Likewise, literature on other behavioral signs of video game dependency was reviewed. The need for the empirical back up of incidence and prevalence of clinically significant problems associated with video game play is stressed.

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D 17
Author(s): Griffiths M.D.; Hunt N.
University: Nottingham Trent University, Psychology Division, Nottingham, UK
Title: Dependence on computer game playing by adolescents
Source: Psychological Reports.1998 Apr; Vol 82(2): 475-480
Sample: 12-16 year olds (N = 387)
Sort of Study: Correlation / prevalence study
Aims: To examine prevalence of dependency on computer games in adolescents. "Dependence" on computer games as measured by the Mental Disorders-III-Revised (DSM-III-R) criteria for pathological gambling
Approach: Questionnaire study was used to establish adolescents computer game "dependence". The scale used adapted criteria for pathological gambling from "Mental Disorders-III-Revised" (DSM-III-R).

Results:
Prevalence
  - Analysis indicates that 1 in 5 adolescents were currently "dependent" upon computer games.
 	
Demographics
  - Boys played significantly more regularly than girls and were more likely to be classified as "dependent."
 	
Playing history
  - The earlier children began playing computer games it appeared the more likely they were to be playing at "dependent" levels.
 	
These and other results are discussed in relation to research on other gaming dependencies.

Research on Computer and video game addiction

D 18
Author(s): Griffiths, M.D.
University: Nottingham Trent University, Psychology Division, Nottingham, UK
Title: Video games and clinical practice: Issues, uses and treatment
Source: British Journal of Clinical Psychology (1997). 36: 639-641
Sort of article: Reference library
The article provides reference libraries on video game (VG) psychotherapy and behavior management, VG and pain management, VG and medical/psychological problems, VG and miscellaneous therapies, treatment of VG addiction.

Research on Computer and video game addiction

D 19
Author(s): Griffiths, M.D.; Dancaster I.
University: University of Plymouth, Psychology Dept, UK
Title: The effect of Type A personality on physiological arousal while playing computer games
Source: Addictive Behaviors. 1995 Jul-Aug; Vol 20 (4): 543-548
Sort of study: Experimental study
Sample: College students, (mean age 24 yrs) (N = 24)
Aims: To examine the relationship between Type A personality and arousal in computer game play.
Independent variable: Type A versus Type B
Dependent variable: Heart rate and physiological arousal during computer game playing
Approach: Heart and arousal rate monitoring during video game play.

Results:
Findings suggest that
   -   through the physiological arousal computer game players experience they may be more likely to play again.
   -   Type A individuals might be more susceptible to addiction since they experience greater arousal.

Research on Computer and video game addiction

D 20	
Author(s): Griffiths, M.D.	
University: Nottingham Trent University, Psychology Division, Nottingham, UK	
Title: Technological Addictions	
Source: Clinical Psychological Forum; 76, 1995, 14-19	
Sort of article: Discussion	
The concept of addiction in the context of behavior is examined and it is assessed whether technological addictions such as fruit machine addiction and videogame addiction can be considered as bona fide addiction.	

Research on Computer and video game addiction

D 21
Author(s): Griffiths, M.D.
University: Nottingham Trent University, Psychology Division, Nottingham, UK
Title: Computer games and clinical psychology: Issues of concern
Source: Clinical Psychology Forum (1994), 68: 25-28
Sort of study: Discussion
The topic of computer game addiction, adverse consequences of excessive computer game playing and its treatment is discussed alongside with therapeutic use of computer games in clinical settings.

Research on Computer and video game addiction

D 22
Author(s): Griffiths, M.D
University: Nottingham Trent University, Psychology Division, Nottingham, UK
Title: Amusement machines playing in childhood and Adolescence: A comparative analysis of video game addiction
Source: Journal of Adolescence (1991); 14, 53-73
Sort of article: Discussion
The article puts the ongoing debate about video games and fruit machines in the US an UK into an empirical perspective. It compares both types of amusement machine in terms of sociodemographic variables, play pattern, etc. Addiction and aggression are topics briefly discussed in the context of alleged negative consequences of amusement machines.

Research on Computer and video game addiction

D 23	
Author(s): Grüsser, S.M.; Thalemann, R.; Albrecht, U.; Thalemann, C.N.	
University: Institute for Medical Psychology, Centre for Humanities and Health Sciences, Chrité, University Medicine, Berlin, Germany. sabine.gruesser@charite.de	
Title: Excessive computer usage in early adolescence - results of a scale assessment [*Exzessive Computernutzung im Kindesalter-- Ergebnisse einer psychometrischen Erhebung]*	
Source: Wiener Klinische Wochenschrift (2005), Vol. 117 (5-6), p: 188-95	
Sort of Study: Prevalence and correlation study	
Sample: children (11- 14 yrs) (N = 323)	
Aims: To examine the prevalence and related variables of excessive computer and video game play in young teenagers in Germany.	
Approach: A questionnaire for excessive computer and video game playing was derived from criteria for pathological gambling (DSM-IV, ICD-10). Children completed the questionnaire regarding their video game playing behavior and other variables.	
Variables investigated: - Watching television - Communication patterns - Ability to concentrate in school lectures - Preferred strategies to cope with negative emotions	
Results: - 9.3 % met the criteria of excessive computer and video game play. - These children were also found to be different from the rest of the group in respect of all of above mentioned variables. - Data also suggest that excessive rewarding behavior is used as an inadequate stress coping strategy by children who play computer and video games excessively.	

Research on Computer and video game addiction

D 24
Author(s): Johansson, A.; Gotestam, K.G.
University: Department of Neuroscience, Section of Psychiatry and Behavioral Medicine, Norwegian University of Science and Technology (NTNU), Ostmarka Hospital, P.O. Box 3008 Lade, Trondheim, NO-7441, Norway
Title: Problems with computer games without monetary: Similarity to pathological gambling
Source: Psychological Reports. Vol 95(2) Oct 2004, 641-650.
Sample: 12 -18 yrs, Norway (N = 3.237), response rate 45.2%
Sort of study: Prevalence study
Aim: To investigate prevalence of computer game addiction in Norway
Approach: Subjects completed a questionnaire. - Young Diagnostic Questionnaire for Internet Addiction (Young, 1998)
Results: 63.3 % frequent player (of different games) playing weekly 36.7 % infrequent users 2.7 % demonstrated pathological playing (4,2 % of the boys and 1.1 % of the girls) 9.8 % at risk playing (14.5% of the boys, 5.0% of the girls)

D 25
Author(s): Keepers, G.A.
University: Veterans Administration Medical Ctr, Portland Div, OR, USA
Title: Pathological preoccupation with video games.
Source: Journal of the American Academy of Child and Adolescent Psychiatry. Vol 29(1) Jan 1990, 49-50.
Sort of study: Clinical case study
Sample: 12 year old boy with a pathological preoccupation with playing video games.
The author classifies the case of a 12 year old boy as "pathological" on the basis of excessive play and stealing to continue playing. His problems were interpreted as a partially successful adaptive response to evident marital and family problems. Placement in a residential treatment center as well as counseling of the family and parents resolved the boys problem.

D 26
Author(s): Klein, M.H.
University: California School of Professional Psychology, Berkeley, USA
Title: The bite of Pac-Man.
Source: Journal of Psychohistory. Vol 11(3) Win 1984, 395-401
Sort of article: Discussion
Target group: Adolescence
Looks at video games to see if they conceal displaced behaviors. The author argues that video games allow users to regress to childhood play, and that video games involve oral and sadistic themes, revolving around fantasies of fear of engulfment. But as with other narcotizing activities, the author says, the dilemmas and conflicts of everyday life reappear once the suspended reality of the video game dissipates. Pac-Man is popular due to an emphasis on oral symbolism, the author suggests.

Research on Computer and video game addiction

D 27
Author(s): Ko, C.H.; Yen, J.Y.; Chen, C.C.; Chen, S.H.; Yen, C.F.
University: Department of Psychiatry, Kaohsiung Medical University, Chung-Ho Memorial Hospital, 100 Tzyou 1st Rd., Kaohsiung City, Taiwan, 807.
Title: Gender Differences and Related Factors Affecting Online Gaming Addiction Among Taiwanese Adolescents.
Source: Journal of Nervous and Mental Disease. Vol 193 (4) Apr 2005, 273-277.
Sort of study: Correlation study
Sample: Adolescence (13-17-yrs) (N = 395)
Used diagnostic instruments : - Chinese Internet Addiction Scale - Questionnaire for Playing Online Games - Rosenberg Self Esteem Scale
Aim: To explore the significance of gender and other related factors on the severity of online gaming addiction.
Approach: --
Results: - Subjects with experience of playing online games were predominantly male. - Several factors were found to be associated with severity of addiction among males but not females. These included lower satisfaction with daily life, older age and low self-esteem.

Research on Computer and video game addiction

D 28
Author(s): Kuczmierczyk, A. R; Walley, P.B; Calhoun, K.S.
University: Louisiana State U School of Medicine, New Orleans, USA
Title: Relaxation training, in vivo exposure and response-prevention in the treatment of compulsive video-game playing.
Source: Scandinavian Journal of Behaviour Therapy. Vol 16(4) 1987, 185-190.
Sort of study: Clinical case study
Sample: 18 year old male
Reports on a college student who played video games compulsively for 3-4 hours a day at an average cost of $5 per day. The young man's behavioral problems could be reduced by 90% using self-monitoring, biofeedback-assisted relaxation training, in vivo exposure and response prevention. The positive change was maintained in two follow-ups 6 and 12 month later.

Research on Computer and video game addiction

D 29
Author(s): Lo, S.K.; Wang, C.C.; Fang, W.
University: Department of Business Administration, National Taipei University, Taipei City, Taiwan.
Title: Physical interpersonal relationships and social anxiety among online game players.
Source: Cyberpsychology & behavior. (2005) Vol. 8 (1), p: 15-20
Sort of study: Correlation study

Variables investigated:
  - Quality of interpersonal relationships
  - Levels of social anxiety

Sample: College-age online players (N = 174)
Aims: To investigate whether amount of time spent playing online games effects the quality of interpersonal relationships and levels of social anxiety.
Approach: Online players completed a questionnaire.
Results: With the increased amount of time respondents spent playing online games the quality of interpersonal relationships deteriorated and social anxiety increased.

Research on Computer and video game addiction

D 30
Author(s): McClure, R.F.; Mears, F.G.
University: University of Texas, Tyler, USA
Source: Psychological Reports. 1984 Aug; Vol 55 (1): 271-276
Title: Video game players: Personality characteristics and demographic variables.
Sample: High school students (N = 336)
Sort of study: Correlation study
Aims: To compare personality characteristics and demographic variables in frequent and infrequent videogame user (or users)
Approach: Subjects completed anonymous questionnaires assessing their videogame playing habits, personality characteristics and demographic variables.
Results: - Support the hypotheses, showing that frequent videogame players were young, bright males who enjoyed competitive activities, challenges, and science fiction movies. - Infrequent players tended to be older, female, not as bright, and to like non-competitive activities. These infrequent players also did not like videogames, were anxious about computers, and did not read many books.

Research on Computer and video game addiction

D 31
Author(s): McClure, R.F.; Mears F.G.
University: University of Texas, Tyler, USA
Source: Psychological Reports. 1986 Aug; Vol 59(1): 59-62
Title: Videogame playing and psychopathology.

Variables investigated:
   -   Neuroticism
   -   Several measures of conduct disorders
   -   Drug- or school-related problems
   -   Extraversion
   -   Achievement orientation

Sample: 9th -12th graders (N = 290)
Sort of study: Correlation study
Aims: To examine the relationship between videogame playing, personality traits, behavioral problems and psychopathologies.
Approach: -   Responses of frequent and infrequent video game users to questionnaires were compared .

Results:
   -   Intense use of video game play was not related to any measure of pathology, neuroticism, several measures of conduct disorders, or to drug- or school-related problems more than it was for infrequent players.
   -   Frequent players did seem to be more extraverted and to be less achievement-oriented than infrequent players.

D 32
Author(s): Ng, B.D.; Wiemer-Hastings, P.
University: School of Computer Science, Telecommunications, and Information Systems, DePaul University, 468 West 28th Pl., Chicago, IL, USA, 60616, bdng@sbcglobal.net
Title: Addiction to the Internet and Online Gaming
Source: CyberPsychology and Behavior. Vol 8 (2) Apr 2005, 110-113.
Sort of study: Correlation study
Sample: MMORPG gamer (N = 91) and offline video game user (N = 48)
Aims: To compare online MMORPG game users with offline video game users in order to find characteristic that differentiate the two types of users and to identify factors that contribute to overuse.
Approach: An online questionnaire was advertised on various different gaming forums hosted on well-known gaming sites.
Results: - Demographic data were quite similar in both groups. The members of which were mostly male, well educated frequently students. - MMORPG users spent significantly more time playing their games than offline game players: in the MMORPG group 45% spent more than 21 hrs a week gaming, in the non-MMORPG only 6 % played that much. Only 16 % of the MMORPG group played up to 6 hrs per week, whereas 84 % of the non-MMORPG played up to the same amount of time. - MMORPG users significantly more often prefer to spent time in the game and felt happier while playing the game than being anywhere else. - Neither of the two groups answered that they play the games in order to alleviate loneliness or to enhance self-confidence.

D 33
Author(s): Petry, J.
Institution: Specialised Clinic for Psychosomatic Illnesses Münchwies, Neunkirchen, Germany. jpetry@ahg.de
Title: Pathological use of computers: Classification and case studies   [*Pathologischer PC-Gebrauch: Nosologische Einordnung und Falldarstellungen*]
Source: In: Ott, R.; Eichenberger, C. (Hrsg.). Klinische Psychologie im Internet. Hogrefe, Göttingen (2003), S. 257-267
Sort of article: Discussion and presentation of three case studies
Discussion about different forms the relatively new "computer-addictions" in terms of classification into acknowledged systems. Three case studies of pathological computer gaming, pathological chatting and pathological surfing are presented from the clinician's perspective.

D 34
Author(s): Phillips, C.A.; Rolls, S.; Rouse, A.; Griffiths, M.D.
University: Phillips, Carol A.: Nene Coll, Northampton, UK
Title: Home video game playing in schoolchildren: A study of incidence and patterns of play
Source: Journal of Adolescence. Vol 18(6) Dec 1995, 687-691.
Sort of study: Prevalence study
Sample: 11-16 yrs (429 males and 387 females)
Aims: To quantify the extent and playing pattern of video game playing in a representative adolescent sample. The study compares male and females.
Approach: School children completed a questionnaire with scales regarding playing habits and "addictive playing behavior" (a check list of 9 items adapted from the DSM-III-R criteria of pathological gambling).
Results: - 77.2% of the sample played video games. - A subgroup of 7.5 % demonstrated a playing pattern that can be conceived as addictive (four out of nine positive responses on the adapted checklist). The majority of these children were male. - Average time spent playing video game was 0.5 – 1 hour a day. - Males played significantly more often and for longer periods, reported more often neglecting homework and were more likely to report feeling better after play.

D 35
Author(s): Sattar, P.; Ramaswamy, S.
Title: Internet Gaming Addiction
Source: Canadian Journal of Psychiatry. Vol 49 (12) Dec 2004, 871-872
Sort of study: Clinical case study
Sample: Man, 31 years (N = 1)

Results:
Presents the case of an 31 year old man classified as "addicted" to the online game "Everquest". It is reported that he developed depression after his fiancée left him. The patient was treated with gabapentin 100 mg 3 times daily for anxiety and escitalopram 10 mg daily for his depression. He attended individual as well as group therapy but ceased both after a month. His craving for gaming and depression improved once the dosage of escitalopram was increased the gabapentin treatment ceased. The authors conclude that treatment of patients with some sort of gaming addiction should focus on co-morbid psychiatric symptoms and their addiction.
    - Addiction Severity Index;
    - Hamilton Rating Scale for Depression

Research on Computer and video game addiction

D 36
Author(s): Shotton, M.
Title: Computer addiction? A study of computer dependency
Source: Book. London: Taylor and Francis (1989)
Sample: Half children, half adults (N = 127), 96% male, self reported as "hooked" on home videogames over the last five years
Sort of study: Correlation study
Approach: Seventy-five of the self reported dependent subjects were compared to two control groups.
Results: - Findings suggest that the computer dependent individuals were highly intelligent, motivated and achievement orientated but often misunderstood. - A follow up after five years the younger group had done well in terms of higher education and working in high ranking jobs.

D 37
Author(s): Soper, W. B.; Miller, M.J.
University: Louisiana Technical University, Counseling Program, USA
Title: Junk time junkies: An emerging addiction among students.
Source: School Counselor. Vol 31 (1) Sep 1983, 40-43.
Sort of article: Discussion
The author explores different factors that make the appeal of games. These could include sophistication of multi-sensual stimulation, possibility to release hostility, to compete, to get reward as skills improve. He points out that the benefit or harmfulness of video games still needs to be further empirically validated, but suggests, that potential of abuse in inherent in video games.

D 38	
Author(s): Sorensen, E.	
University: Kobenhavns Universitet, Kobenhavns, Denmark	
Title: Addiction to online games? When children and adolescents play too much [*Nar Born og unge spiller meget online - Og voksne frygter afhaengighed*]	
Source: Psyke and Logos. Vol 26(1) 2005, 137-152	
Sort of study: Correlation study	
Sample: 6-16 yrs old	
Aims: In order to achieve a more integrated understanding of online game use and online game addiction among children and adolescents, other leisure activities and motivations to play are included.	
Data from the Nordic project on Internet use by children aged 6-16 were used. This study was carried out in 2002-2003 and focused particularly on the amount of time children spent on the Internet. Since addiction can not be reduced to the amount of time spent on online games, a follow up study was initiated by "Medieradet for children and adolescents". In the quantitative interview survey time spent on playing online games and the relationship between online gaming and other activities is taken into consideration. It is argued that for an integrated understanding of online game addiction specific life activities and use of time of children and adolescents should be included.	

D 39
Author(s): Suler, J.
University: Rider University, Lawrenceville, NJ, USA
Title: Computer and Cyberspace "Addiction".
Source: International Journal of Applied Psychoanalytic Studies. Vol 1 (4) 2004, 359 -362.
Sort of study: Discussion
The author defines computer, virtual and cyberspace addiction in broad terms as a dysfunctional preoccupation with some type of computer-mediated activity. Within this, he says, there may be distinct subtypes, arguing that each single subtype might fulfill different needs, some satisfy social needs others involve gaming and competition. He states that there is definitely a group of people harming themselves in the way they are dealing with the possibilities of cyberspace, virtual reality and internet. The degree of a persons' impairment to function in the real world is - as with any mental disorder - to be used to define severity of the addiction. However it is hard to find the appropriate cut-off point at which to distinguish between enthusiastic preoccupation and pathological obsession.

Research on Computer and video game addiction

D 40
Author(s): Tazawa.Y; Okada, K.
University: Department of Pediatrics, Faculty of Medicine, Tottori: University, Nishimachi 36-1, Yonago 683-0834, Japan tazawa@grape.med.tottori-u
Title: Physical signs associated with excessive television-game: playing and sleep deprivation.
Source: Paediatrics international: Official journal of the Japan: Pediatric Society, Vol. 43 (6) (2001), 647-50
Sort of study: Correlation study
Sample: School children 6 -11 yrs (N = 1143)
Aims: To examine the role of excessive television-game playing in unexplained persistent symptoms.
Approach: - Guardians completed a questionnaire enquiring about amount of time children spent using TV, television games and amount of sleep.   - Children were checked for physical signs of black rings under their eyes, muscle stiffness in the shoulder and, as a consequence of the former, displacement of the scapula.
Results: - The three physical signs were found in 6 - 20% of the children.   - Boys played more television video games than girls.   - Boys were more likely to show black rings under their eyes and muscle stiffness than girls.   - Black rings under their eyes and muscle stiffness was more often found in children who played television video games for more than one hour a day.   - Black rings under their eyes and muscle stiffness correlated with the time children spent playing television video games.   - All three symptoms were related to sleep deprivation.

Research on Computer and video game addiction

D 41
Author(s): Tejeiro, R.A.; Moran, R.M.B.
University: Univercidad Nacional de Educacion a Distancia, Centro Civico Le Reconquista, 1102 Algeciras, Spain. tejeirosalguero@terra.es
Title: Measuring problem video game playing in adolescents.
Source: Addiction. Vol 97(12) Dec 2002, 1601-1606.
Sort of study: Scale assessment
Sample: Adolescents 13 -18 yrs (N = 223)
Aims: To design and validate a short and easy to apply scale with which to measure the problems associated with the apparently addictive use of all types of video games and video game systems.
Approach: A scale (PVP; problem video game playing) was derived based on DSM-IV criteria for substance dependence, pathological gambling and literature on addiction. The scale was applied to an adolescent sample and its psychometric properties were analysed.
Results: - At 0.69 internal consistency of the PVP (problem video game playing) is acceptable. Analysis shows that the scale seems to be unidimensional. - Construct validity was confirmed by associations between measures of problem play (such as frequency of play, mean and longest time per session, self and parents' perception of play) and scores of the "severity of dependence scale". It appears that the PVP is a useful diagnostic instrument to assess excessive use of video games.

Research on Computer and video game addiction

D 42
Author(s): Tejeiro, R.
University: Universitat Nacional de Educacion a Distancia, Los Jazmines, 46, Algeciras, Spain, 11207, tejeirosalguero@terra.es
Title: Video games addiction: A review [*La adiccion a los videojuegos. Una revision*]
Source: Adicciones. Vol 13(4) 2001, 407-413.
Sort of study: Literature Review
The author reviews research done on video game addiction. Critically, he points out that the majority of studies are general surveys with doubtful validity and reliability. - Some investigations focus only on certain types of video machines; making generalization of results only possible to restricted extent. - No study explicitly explains the model of video game addiction, while nature and source of problem remain unclear. - Concepts used are seldom defined in an appropriate way. - The author points out that a valid and reliable diagnostic instrument available to measure the assumed disorder are not available. - Adaptations of diagnostic instruments are only applicable to a limited range of video game systems. Their psychometric properties remain often unknown. The author to the general conclusion that the little work that has been done on video game addiction is scientifically weak. Objectives for future research are laid out.

D 43
Author(s): Thalemann, R.; Grüsser, S.M.
University: Institute for Medical Psychology, Center for Humanities and Health Sciences, Charité – University Medicine of Berlin, Germany
Title: Psychophysiological characterization of excessive computer game playing
Source: 35th Annual Meetin of the Society for Neurosciences, Washington (2005)
Sort of study: Experimental study
Sample: 15 excessive gamers versus 15 healthy control subjects (although experienced in computer gaming)
Aim: Looks at computer game addiction by using (next to psychological scales) psycho/physiological methods usually used in research into substance related addiction.
Approach: Subjects viewed standardized visual stimuli. Positive, negative, neutral and alcohol-related stimuli were included as well as computer game related stimuli. Their reaction was assessed in terms of   - EEG responses (event related potentials, LPC)   - EMG startle amplitude as a measure for pleasure arousal   - Psychological responses (arousing/relaxing; pleasant/unpleasant).
Results: - EEG brain response analysis revealed that excessive computer gamers processed computer game-stimuli as arousing and as positive, whereas controls processed computer game-stimuli in the same way as neutral stimuli or alcohol-related ones.   - The amplitude of a startle response was significantly lower in excessive computer gamers compared to controls indicating a strong arousal induced by computer-game related stimuli.   - Psychological assessment showed that excessive computer gamers perceived computer game-stimuli as being significantly more pleasant and more arousing than controls did.

D 44
Author(s): Thalemann, R.; Albrecht, U.; Thalemann, C.; Grüsser, S. M.
University: Institute for Medical Psychology, Center for Humanities and Health Sciences, Charité – University Medicine of Berlin, Germany
Title: Questionnaire for computer game behavior in children (CSVK); short description and psychometric variables [*Fragebogens zum Computerspielverhaltens bei Kindern (CSVK), Kurzbeschreibung und psychometrische Kennwerte*]
Source: Psychomed (2004), 16: 226-223
Sort of study: Scale assessment
Sample: 11 - 14 yrs old, (N = 323)
Aim: To assess the first German diagnostic instrument for excessive computer game behavior in children. The CSVC also covers related variables such as social environment, drug experience, well being and use of other electronic media in order to get information about stress coping strategies.
Approach: - Items for diagnosis of excessive computer game behavior were derived by using criteria for substance addiction and pathological gambling of international classification systems (DSM-IV-TR, 2003; ICD-10, 2000). - The questionnaire, containing 237 items, was administered to the children.
Results: - Factor analysis confirmed to a large extent structure underlying scales of CSVC. - Statistical analysis revealed that the scale for "excessive computer game playing" provides a sufficient homogeneity and is reducible by factor analysis to one dimension. - Low reliability was found for scales of related variables. Those scales are relevant for actual diagnosis they just ascertain variables that might influence computer game behavior. For this purpose the found quality factors are sufficient. - Further analysis in terms of re-test reliability and criteria validity needs to be conducted. - Validation within a clinical sample throughout the therapeutic process is planed.

Research on Computer and video game addiction

D 45
Author(s): Wood, R.T.A.; Gupta, R.; Derevensky, J.L.; Griffiths, M.D
University: International Centre for Youth Gambling Problems and High-Risk Behaviors, McGill University, Duggan House, 3724 McTavish, Montreal, PQ, H3A 1Y2, Canada Nottingham Trent University, UK
Title: Video Game Playing and Gambling in Adolescents: Common Risk Factors.
Source: Journal of Child and Adolescent Substance Abuse. Vol 14 (1) 2004, 77-100.
Sort of study: Correlation study
Sample: Children and adolescents between 10 and 17 years old (N = 996)
Aims: Given that they since they share some similarities, for instance intermittent rewards and elements of randomness, to examine the relationship between video game playing and gambling behavior in adolescents
Approach: Subjects completed a questionnaire.
Results: Subjects' responses were classified into three groups: problem-gamblers, non-problem-gamblers and non-gamblers. - Excessive time volume was significantly more likely to be dedicated on video games by problem gamblers than by non-problem-gamblers or non-gamblers. - In their self ratings problem gamblers were significantly more likely to classify themselves as high video game performers than non-problem gamblers or non-gamblers - Video games and electronic machine gambling were significantly more likely to be rated as promoting dissociation and to be arousing and/or relaxing by problem gamblers than by non-problem gamblers and non gamblers.

Research on Computer and video game addiction

D 46
Author(s): Yang, Z.
University: School of Psychology, Southwest China Normal University, Chongqing, China, 400715
Title: Research on the Correlation between Life Events and Video Game Addiction in Junior Middle School Students.
Source: Chinese Journal of Clinical Psychology. Vol 13(2) May 2005, 182, 192-193.
Sort of study: Correlation study
Sample: Adolescent (13-16-yrs) (N = 165)
Aim: To examine the correlation between life events and video game addiction of junior middle school students.
Approach: Subjects were tested on two scales: - Video Game Addiction Questionnaire - Adolescent Self-Rating Life Events Checklist (ASLEC)
Results: - Boys are more likely to become addicted than girls. - Video game addiction is related to self perceived life events. A significant relationship was found between the scores of both scales. Adolescents scoring high in the Life Event Checklist were significantly more likely to score high on the video addiction scale.