

# Video Games addiction as it relates to children with hemophilia in Japan

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## Introduction and Objectives:

Excess playing of video games (VG) may prevent child development. However, children with hemophilia usually play VG when they are restricted to indoor activities. This study aims to investigate VG usage, dependence, and related parental rules limiting gaming time for children with hemophilia.

## Materials and Methods:

Participants were children with hemophilia aged below 16 years. An anonymous self-administered study was conducted by delivering questionnaires to the children's parents through hemophilia self-help groups between September and October 2015. Variables were the children's age, gender, hemophilia details, the age when video gaming started, the time spent per day on gaming during weekdays/holidays, the details of parental rules, and the Video Games Dependence Index (VGDI) (Nakayama et al. 2011). The VGDI scores were compared to those of same aged children from a previous study. The results of each groups were examined by *t*-test. A statistical analysis was conducted using R3.1.0 which is a statistical software.

**Results:** Participants in the present study consisted of 14 male children. Children with hemophilia A comprised 78.6% of the group, and the remaining children were hemophilia B or unknown related not to recognize their own hemophilia type (Table 1). The mean age of the children was 7.9 years; on average, they started playing video games at 4.5 years (Table 2). The mean amount of time spent on playing VG was 48 minutes on weekdays and 77 minutes on holidays (Table 3).

	n	%
Total	14	100.0
patient's response	3	21.4
mother's response	11	78.6
patient's gender		
male	14	100.0
patient's age (mean±SD)	7.86±3.3	
disease		
hemophilia A	11	78.6
hemophilia B	2	14.3
unknown	1	7.1
Do you have siblings?		
yes	11	78.6
no	3	21.4

year old	n	%
1	2	14.3
3	4	28.6
4	3	21.4
5	2	14.3
6	1	7.1
7	1	7.1
14	1	7.1



	Total	Preschool child	Schoolchild	Junior high school student
weekday				
mean	48.8	20.0	66.4	30.0
weekend				
mean	76.9	37.5	100.0	75.0

Note) SD is an abbreviation for standard deviation.

The mean total score of VGDI was 37 points (Table 4), significantly higher than that of children in the general population (Nakayama et al. 2011). Table 5 shows each score of VGDI.

	present study			previous paper			p-value
	n	mean	SD	n	mean	SD	
Total	12	37.17	9.54	1008	28.09	9.95	0.00
preschool	3	35.00	8.72	-	-	-	-
primary school	7	37.57	11.73	284	23.33	7.56	0.00
junior high school	2	39.00	1.41	387	28.28	9.59	0.00
high school	-	-	-	337	31.89	10.44	-

Note) We conducted t-test to compare with previous paper. Significant level were p<0.05.

		queries	mean	SD
I Escaping from schoolwork	1	I can not concentrate studying caused by VG.	2.5	0.9
	2	I can not do my homework/helping housework because I spend a lot of time for VG.	2.2	0.9
	3	I play VG before doing something that I have to do.	2.7	1.0
	4	My grades fallen in school because I have spent much time for playing VG.	2.2	0.8
	5	I can not sleep well because I play VG until midnight.	1.4	0.9
II Threatening thought	6	I can forget daily anxiety or nasty things by thinking about VG.	2.3	1.0
	7	I felt that playing VG is calm down the melancholy or upset.	2.4	1.0
	8	I am looking forward to playing VG next.	2.7	1.0
	9	If VG is gone, I worry that my life is uninteresting.	2.3	1.1
	10	When I do not play VG, I think about VG.	2.6	0.9
III Escaping from social life	11	I prefer playing VG alone rather than going out with someone.	2.5	0.8
	12	I prefer playing VG alone rather than playing with best friends.	1.9	0.8
IV Reflections on excessive playing VG	13	If I playing VG too much, my family advised me to stop playing VG.	2.9	0.9
	14	I regret that I had played VG more than I had thought.	2.0	0.9
V Failure of time management	15	When I can not stop playing VG easily, I make an excuse by saying that "just a little bit more!".	2.8	0.9
	16	I have tried to reduce the time of playing VG, but it has ended in failure.	2.1	0.7

Children who had parental rules limiting VG use amounted to 57% of the study sample (Table 6). Of these, 75% were limited to playing VG to one hour or less per day (Table 7).

	n	%
Yes	8	57.1
No	6	42.9

	n	%
up to 15 min.	1	12.5
up to 1 hour	6	75.0
up to 3 hours	1	12.5

**Conclusions:** Children with hemophilia played longer than that of other children and were more addicted to VG than that of general population. The results suggest that children who had parental rules limiting VG were not many, and even a maximum limit of time spent on playing VG was much more than 30 minutes that The Japan Pediatric Society advocated. These results suggest that appropriate guidance on limiting VG usage is a need for parents.

**Conflict of interest disclosure:** none



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Nurses Issues  
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