

Effect of Utilizing Health Belief Educational Model on Nursing Students' Internet Addiction, Attention Span Levels and Quality of Life

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Abstract:

Background: Internet addiction disorder is proved to cause negative consequences on individual physical and mental health and all quality of life domains which include physical, psychological, social and economic, environmental and academic domains. **Objective:** To explore effect of utilizing health belief educational model on nursing students' internet addiction, attention span levels and quality of life. **Settings:** This study was carried out at the Faculty of Nursing, Damanhour University. **Subjects:** a random sample of 144 out of 227 students who have moderate and high levels of internet addiction were recruited to participate in the study and assigned to (control and study groups). **Tools:** three tools were used. Tool one: internet addiction test. Tool two: Attention span assessment levels questionnaire. Tool three: Student Quality of Life Assessment Questionnaire (SQLAQ). **Results:** There was a significant decrease in internet addiction level for students in the study group than in the control group ($p < 0.001^*$) post intervention application. Furthermore, majority of the study group exhibited higher levels of attention span and quality of life ($P = < 0.001^*$) post intervention. **Conclusion:** Health belief educational intervention was proved to be effective in reducing internet addiction level, improving attention span and quality of life among study group compared to control group. **Recommendations:** Replication of the study on large proportionally sampling and other settings to ensure that results can be generalized.

Keywords: Internet addiction, Attention span, quality of life and nursing students.

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Introduction

Internet technology improves various aspects of our lives, it is a necessary part of everyday routine, work, private life, social functioning and learning, however, the increased usage of internet has caused many drawbacks especially what is known as internet addiction Problem (IAP). (Abd elsalam, et al., 2019; El mawgood, et al., 2021)

Moreover the invasion of COVID-19 pandemic forces people to spend much more time at homes and decreased face to face interaction, which rapidly increases the time people spent on internet and technological

devices. In the same line, schools and faculties shifted from face to face education at classrooms to electronic learning, this make students spent excess time on internet between lectures, assignments, entertainment and playing games using multiple technological devices, so all of these factors increased students' tendency to be internet addict. (Abd elsalam, et al., 2019; Dong, et al., 2020)

The term of internet addiction problem was used in 1995 by Ivan Goldberg for pathological internet use. It is also known as

problematic internet use (PIU), computer addiction and internet dependence. It was defined as "a behavioral addiction marked by a compulsive desire to perform one or more online activities" (Khoshgaftar, et al., 2019)

Internet addiction problem may results in many bad effects on individual health and quality of life domains including physical, psychological, social and economic, environmental and academic. Similarly, some studies suggest that active internet use shortens attention span from 12 to 5 minutes. It also affects the way we think, act and interact, perceive and remember. Attention span was defined as the time one spends focusing on a task before distraction. It is critical for person to achieve their goals. It is the key for effective learning. These bad effects in turn affects students' academic performance and achievements (Media monthly, 2020; Tripathi, 2021)

Therefore, treating (IAP) is a very important way to enhance nursing students' QOL, academic performance besides learning. Treatment of (IAP) may include psychological, non-psychological, or alternative solutions. (Ahmadi, et al;2021)

An alternative solution includes health education, which can be a starting point to enhance the health status and behaviors of population. Various theories and models provide evidence and base for the purpose of community health promotion and prevention of diseases. One of these models is the Health Belief Model (HBM) which represents a simultaneous process used to encourage healthy behavior among individuals by increasing their perception of risk factors, severity, benefits and barriers. (Hussin, et al., 2019; Karl, et al., 2022).

The Health Belief Model (HBM) supposes that people will take action to prevent illness if they regard themselves as susceptible to a condition (perceived susceptibility), believe it would have potentially serious consequences (perceived severity). Also, they may believe that a particular course of action available to them would reduce the susceptibility or

severity or lead to other positive outcomes (perceived benefits), and if they perceive few negative attributes related to the health action (perceived barriers). Additionally, HBM scholars later suggested that self-efficacy is the belief that one can successfully complete the behavior of interest (Orbell, et al., 2020; Zhao, et al., 2022).

What is serious about IAP is that students usually not aware of being addicts, they lack awareness concerning IAP. So, it is necessary to increase their knowledge and awareness about IAP, definition, signs and symptoms, negative impact and methods to control such disorder. Many studies conducted in Egypt concluded the presence of high prevalence of IAP. But few studies were done to examine the impact of educational program on the level of internet addiction between nursing students. That's why the present study was conducted. (Elmawgood, et al., 2021; Özparlak & Karakaya, 2020; Younis, et al., 2020).

Aim of the study

This study aimed to explore the effect of utilizing health belief educational model on nursing students' internet addiction, attention span and quality of life.

Research hypotheses

The following hypotheses were developed:

***H1:** Nursing students who receive an educational intervention based on health belief model exhibit lower internet addiction level than those who are not.

***H2:** Nursing students who receive an educational intervention based on health belief model exhibit higher level of attention span than those who are not.

***H3:** Nursing students who receive an educational intervention based on health belief model exhibit higher quality of life than those who are not.

Materials and method

Materials

Design: A quasi- experimental research design was utilized in this study.

Settings: This study was carried at Medical Surgical Department , Faculty of Nursing damanhour University.

Subjects: A random sample of 144 out of 227 first year students who have moderate and high levels of internet addiction assigned to the study and control groups (72 students in each group). The sample size was calculated using the Epi info7 program based on the following information:

- Population size (moderate or high levels internet addict): 227
- Expected frequency: 50%,
- Acceptable error: 5% and
- Confidence coefficient: 95%
- Minimum sample size: 144

Tools: Three tools were used for data collection in this study.

Tool I: Internet Addiction test (IAT)

Internet Addiction Test (IAT) was developed by Young (1950) and used by (Hussin, Ahmed, & Ismail, 2019). It was used to measure the addictive use of internet. The researcher adapted this tool to match the study aim. The test consists of 20 items measured on 5-point likert scale and scored from 1 to 5 ranging from rarely (1) to always (5). The total score ranging from 20 to 100 and interpreted as follows: From 20-46 indicates mild level of internet addiction, from 47-73 indicates moderate level of internet addiction, from 74 - 100 indicates severe level of internet addiction

Tool II: Attention span assessment levels questionnaire:

This tool was developed by Bhatia (2022) to assess the attention span levels. The researcher adapted this tool to match the study aim. It consists of 20 items measured on 5-point likert scale ranging from rarely (1) to always (5), reversed items were considered. The total score ranging from 20 to 100 and interpreted as follow: from 20-46

indicates mild level of attention span, from 47 -73 indicates moderate level of attention span ,from 74-100 indicates high level of attention span

Tool III: Students' Quality of Life Assessment Questionnaire (SOLAQ)

This tool was developed by Mohy, Elghetany, Taha, (2020) to assess quality of life level. The researcher adapted this tool to match the study aim. It consists of 51 items about QOL distributed over 5 categories as follows: quality of life in physical and life style domain (10 items), psychological and emotional domain (10 items), social and economic domain (11 items), environmental domain (5 items), academic domain (15 items). It is a 5- point- likert scale ranging from rarely(1) to always. Reversed items were considered .The total score ranges from 51 to 255 and interpreted as follow: from 51 to 118 indicates low level of QOL, from 119to 186 indicates moderate level of QOL, from 187 to 255 indicates high level of QOL.

In addition to a sheet that contains nursing students' personal and academic data and it consists of two parts:

Part(1) personal and academic data such as student's name, age, gender, previous grades, family income and residence

Part (2) pattern of internet use such as average hours of internet use, minutes of internet use in every time, the main cause of using internet, number of friends on internet, preferred device and feelings when being deprived of or stopping using internet

Method

Approval was obtained from the Research Ethics Committee, Faculty of Nursing, Alexandria University for carrying out this study. An official Permission to conduct the study was obtained from dean of the Faculty of Nursing, Damanhur University, the head of Medical and Surgical Department, Faculty of Nursing, Damanhur University after explaining the aim of the study. All study tools were adapted by the researcher. All tools were tested for their content validity by five experts in the related fields, then the necessary modifications were done. A pilot study was done on 10% (14 students) of

sample size who were selected randomly to test the feasibility, clarity and applicability of the tools. Those students were excluded from the study sample. Accordingly, the necessary modifications were done. Reliability of all tools were tested using Chronbach's Alpha test. The reliability result of tool I, II, III were $r = .861, .880, .887$ respectively. Study Participants were assigned by simple random sample technique then consequently divided into two equal, matched groups, 72 students in each group

Data collection phases:

Data collection was carried out through four phases.

I: Assessment phase:

The researcher explained the aim of the study and its pathway to all study participants and took their approval to participate in the study, this phase was conducted through two steps:

Survey step; which included surveying of all nursing students who were enrolled in the first academic year during the second semester (2022-2023) through; assessing internet addiction level using IAT (tool I). Then according to the results of the survey, a random sample of the students who had moderate or severe levels internet addict were assigned randomly into two equal groups(study and control group) 72 students in each group.

Pretest step; related to the results of the survey, initial assessment were done for both groups (study and control group) immediately once the participants eligible for the study before application of educational intervention to collect baseline data using tool (II) to assess nursing student's attention span level and tool (III) to assess quality of life.

II: Planning phase:

During this phase the researcher prepared the content, teaching methods and media. The educational sessions and its schedules designed by the researcher, in term of; objectives, content, teaching strategies, timing, place, media and evaluation (time, place, tools).

Teaching methods: the researcher instructions were implemented through face

to face and online discussion, brain storming and interactive lectures, group discussion for the study group, while the control group didn't exposed to any teaching instructions. Media used: PowerPoint presentation was used to support the given information.

Phase 3: Implementation phase:

- The educational intervention based on health belief model was implemented for the study group in 5 sessions over one month, one/week , each session lasted about 60 -90 minutes. The study group only received the relevant content, power-point for each session. over one month, one/week. The educational sessions conducted at the end of the day after nursing students finishing clinical hours (face to face) in clinical labs (70%) or online through Microsoft team (30%).

***The first session** was based on the construct of perceived susceptibility and refreshing knowledge of students about internet addiction definition, statistics, types, causes, risk factors, signs and symptoms. The researcher provided complete information about internet addiction definition, causes, risk factors and diagnostic criteria through interactive lecture.

***The second session:** This session was based on the construct of perceived severity of internet addiction. The researcher started this session with summarizing the previous one and explained in details how the internet excessive use negatively affect physical, psychological, social-economic, environmental and academic life and productivity to change their beliefs and perception through discussion and active participation of students.

***The third session:** it was based on the construct of perceived benefits and barriers of proper internet usage. It started with reviewing the content of the previous sessions. The benefits of proper internet use was explored via brain storming. Also, the barriers of proper internet usage was explored via a focus group discussion. The researcher target was to enable students to weigh barriers against benefits and decide to use

internet properly, also to direct how to overcome barriers. At the end of this session students were asked to assess their internet usage hours and record them in the weekly tables to monitor their use (self-assessment).

***The fourth session:** it was based on the self-efficacy construct. To promote self-efficacy; "goal setting" and "role modeling" were used as main educational strategies. Based on the causes of internet use for each student the researcher provide solutions and strategies how to reduce internet use, based on the previous self –assessment, two successful students asked to share their experience with group to motivate others and to increase self-efficacy.

***The fifth session:** it was based on cue to action construct. The objectives of this session were propose cue to action for students, motivate students to apply diversional activities instead of being online. The session started with reviewing content of previous sessions. The researcher asked students to report their efforts to attain their goals, compared with each other's and discuss their experiences in small groups. Then the educator taught the nursing students how to identify and pay attention to cues that could remind them of the proper use of internet (family, friends, religion), also they discuss other activities to replace internet use including exercises, social activities, family visits, drawing, music, quraan.

VI: Evaluation phase :

All students (study and control group) were evaluated two times after finishing the educational intervention by two months (at the second week of June) and by three months (at the second week of July 2023) after completion of sessions using tool I, II, III. Comparisons between the control and study groups were carried out using appropriate statistical analysis in order to evaluate the effectiveness of the program.

Statistical analysis

Data were fed to the computer and analyzed using IBM SPSS software package version 23.0. The Shapiro-Wilk was used to verify the normality of distribution of variables; Comparisons between groups for categorical

variables were assessed using Chi-square test (Monte Carlo or Fisher Exact). Student t-test was used to compare two categories for normally distributed quantitative variables, ANOVA with repeated measures followed by Adjustment Bonferroni for multiple comparisons between the three periods in each group. Significance of the obtained results was judged at the 5% level.

Ethical considerations

An informed written consent was obtained from all nursing students after explanation of research purpose. All nursing students were informed that participation in the study is voluntary and he/she can be withdrawn from the study at any time without any penalties. Confidentiality of collected data was ensured

Results

Table (1) shows comparison between the study and control groups according to internet addiction level before and after intervention. It was found that mean scores of the study group decreased from 69.0 ± 15.6 to 48.5 ± 20.6 post1, 49.3 ± 20.3 post2 respectively after intervention. While no obvious change in mean scores for control group 66.0 ± 14.6 , 62.6 ± 11.5 , 66.2 ± 12.2 respectively. Also, there was statistically significant difference in favor of the study group at $p < 0.001$. There was no statistically significant difference for control group before and after intervention where $p = 0.092$. Finally, there was statistically significant difference between study and control group after intervention $p < 0.001$.

Table (2) displays comparison between the study and control groups according to attention span levels before and after intervention. It was obvious that mean scores for study group increased from 43.7 ± 14.8 to 53.9 ± 16.2 , 52.4 ± 16.0 after intervention compared to no obvious change in control group mean scores (45.1 ± 13.9 , 43.3 ± 15.7 , 43.1 ± 14.8) respectively. There was statistically significant difference in favor of the study group that $p < 0.001$, with no statistically significant difference for control group $p = 0.499$. Finally, there was statistically significant difference between

study and control group after intervention $p < 0.001$

Table (3) illustrates comparison between the study and control groups according to overall quality of life. It was found that mean scores for study group improved from 141.1 ± 23.0 to 188.9 ± 28.1 post1, 179.9 ± 32.7 post2 after intervention. While no change in mean scores of control group before and after intervention (146.1 ± 29.4 , 147.3 ± 21.2 post1, 149.3 ± 24.3 post2) respectively. There was statistically significant difference in favor of the study group before and after intervention where $p < 0.001$, there was no significant difference regarding control group before and after intervention that $p = 0.181$. There was statistically significant difference between study and control groups after intervention $p < 0.001$

Table (4) correlation between internet addiction, attention span and quality of life, it was found that there was statistically significant negative correlation between internet addiction and attention span ($p < 0.001^*$, $r = -0.812^*$, -0.729 , -0.601^* , -0.371^*), there was statistically significant negative correlation between internet addiction and quality of life ($p < 0.001^*$, $r = -0.905^*$, -0.472^* , -0.551^* , -0.241^*), while there was statistically significant positive correlation between quality of life and attention span ($p < 0.001^*$, $r = 0.702^*$, 0.484^* , 0.443^*)

Discussion

The results of the current study revealed that the students in study group have lower levels of internet addiction after the intervention compared to control group (table 1). Therefore, the first hypothesis "nursing students who receive educational intervention based on health belief model exhibit lower internet addiction level than those who are not" was accepted. The same picture was reflected in students' attention span, where the mean scores of study group regarding attention span group were higher than mean scores of control group (table 2). Therefore, the second hypothesis "nursing students who receive the educational intervention based on health belief model exhibit higher level of attention span

than those who are not" was accepted. In the same line, regarding quality of life, there were significant increase in mean scores of study group after the intervention compared to mean scores of control group (table 3). Therefore the third hypothesis "nursing students who receive educational intervention based on health belief model exhibit higher quality of life than those who are not" was accepted.

Previous result was in line with Celik (2017) who reported the effectiveness of the applied educational program in reducing internet addiction tendencies. Furthermore, current result was in agreement with a recently conducted study by Younis et al. (2020) who proposed that there was improvement after applying the educational intervention. Moreover, the result of the present study is in agreement with Gholamian, et al, (2019) who concluded that the intervention group revealed a significant decrease, in terms of using the internet post program application $p < 0.001$.

This finding could be related to the fact that the educational intervention sessions could potentiate subjects to be involved in the training. Also, the content was presented in a clear, simple, and motivating manner which attract their attention and affect their perception toward the severity of such disorder and how it can negatively impact their life and learning (Baumann & Karel, 2013). Besides, it increases their awareness of susceptibility that each of them diagnosed themselves as being internet addicts based on their signs and symptoms (self-assessment). In the same line, students identified with the researcher their perceived barriers and benefits of healthy internet use which encourage them to work to gain this benefits and overcome barriers.

The results of the current study regarding attention span is in line with A recent study by Bulut (2023) who concluded that there was a significant association between attention and internet use and explained how its usage negatively affects brain processes, including attention and concentration. Also, Haarms & Sluijs (2015), Quaglio & Millar (2020) concluded that problematic internet use has

bad impact on mentality including attention, thinking abilities as it is very disruptive.

The improvement in attention span of the study group may be due to reduced internet usage time which results in providing enough time for students to have adequate sleep, diet and exercises. Which improve their physical health, activity, cognitive thinking and this all impact attention span positively (Wooll, 2022). Moreover, they express the great role of time management and setting priorities and goals which improve their self-efficacy to reduce internet use hours. Which decrease attention division and distraction and enabled them to concentrate on their academic tasks and duties, physical health, social relations.

The results of the current study regarding quality of life in general was consistent with Noroozi et al. (2021) who proposed that people who had a high internet addiction received lower scores of quality of life than those who were normal users. This was congruent with Ragheb, et al (2018) and Masaeli & Billieux (2022) who reported a negative association between internet addiction and physical, mental, social, and environmental health

The improvement in the study group QOL after the program in the current research may be due to reducing time of internet use which is reflected on all quality of life domains positively and the impact of religion and spiritual beliefs (cues to action) which increase their effort to reduce all what may harm.

On the other hand, the current study revealed that attention span is negatively correlated to internet addiction level, which is consistent with Augner et al. (2023) who reported significant connection between pathological internet use and attention deficit. Also, Sayem & Parasuraman (2023) discussed that there was significant negative association between internet addiction, attention span, memory and analytical thinking.

Also, in the current study quality of life is negatively correlated with internet addiction, which was in congruence with Chanthasin et al. (2021) and Qian et al. (2022) who reported

that internet addiction can result in harmful effects in both physical and mental health, for the reason that a higher level of depression severity, anxiety, stress, and poor sleep quality, all of which leads to poor QOL. Also, it is consistent with Rao (2018) who concluded that every aspect of life is made less enjoyable by ineffective attention span and management. It lowers productivity, induces worry and despair, and lessens the significance of interactions and dialogues

Conclusion

Based upon the present study findings, health belief educational model had great effects on lowering the level of internet addiction, improving attention span and quality of life between nursing students.

Recommendations

Based on the findings of the present study, the following recommendations are offered:

- Conducting educational workshops for all nursing students about internet addiction risks and management to improve their awareness of such disorder to limit internet time use, improve their quality of life and achievement
- Conducting educational workshops for all nursing educators about internet addiction risks and management to improve their awareness of such disorder to limit internet time use

Table (1): Comparison between the study and control groups according to their internet addiction level before and after intervention:

Tool I: Internet Addiction test (IAT):	Group A (study group) (n = 72)		Group B (control group) (n = 72)		Test of sig.	P
	No.	%	No.	%		
Pre test						
Mild level of internet addiction	0	0.0%	0	0.0%	$\chi^2 = 0.446$	0.504
Moderate level of internet addiction	32	44.4%	35	48.6%		
Severe level of internet addiction	40	55.6%	36	50.0%		
Min. – Max.	47.0- 89.0		47.0-89.0		t = 1.335	0.184
Mean \pm SD	69. 6 \pm 15. 6		66.0 \pm 14.6			
Post 1						
Mild level of internet addiction	43	59.7%	1	1.4%	$\chi^2 = 64.784^*$	<0.001*
Moderate level of internet addiction	16	22.2%	59	81.9%		
Severe level of internet addiction	13	18.1%	12	16.7%		
Min. – Max.	20.0- 85.0		20.0- 82.0		t = 5.087*	<0.001*
Mean \pm SD	48.5 \pm 20.6		62.6 \pm 11.5			
Post 2						
Mild level of internet addiction	41	56.9%	1	1.4%	$\chi^2 = 53.844^*$	<0.001*
Moderate level of internet addiction	21	29.2%	50	69.4%		
Severe level of internet addiction	10	13.9%	21	29.2%		
Min. – Max.	20.0- 85.0		45.0- 85.0		t = 6.051*	<0.001*
Mean \pm SD	49.3 \pm 20.3		66.2 \pm 12.2			
F (p)	45.592* (<0.001*)		2.530 (0.092)			

χ^2 : Chi square test MC: Monte Carlo

t: independent t- test

F: ANONA with repeated measures between pre, post1 and post in each group

* Statistically significant p-value at ≤ 0.05

Table (2): Comparison between the study and control groups according to their attention span levels before and after intervention

Tool II: attention span assessment levels questionnaire	Group A (study group) (n = 72)		Group B (control group) (n = 72)		Test of sig.	P
	No.	%	No.	%		
Pre test						
Mild level of attention span	47	65.3%	44	61.1%	$\chi^2 = 1.346$	^{MC} p= 0.607
Moderate level of attention span	24	33.3%	28	38.9%		
High level of attention span	1	1.4%	0	0.0%		
Min. – Max.	20.0-78.0		20.0-69.0		t = 0.609	0.544
Mean \pm SD	43.7 \pm 14.8		45.1 \pm 13.9			
Post 1						
Mild level of attention span	26	36.1%	51	70.8%	$\chi^2 = 17.445^*$	<0.001*
Moderate level of attention span	35	48.6%	16	22.2%		
High level of attention span	11	15.3%	5	6.9%		
Min. – Max.	26.0-91.0		23.0-79.0		t =3.982*	<0.001*
Mean \pm SD	53.9 \pm 16.2		43.3 \pm 15.7			
Post 2						
Mild level of attention span	29	40.3%	53	73.6%	$\chi^2 = 16.346^*$	<0.001*
Moderate level of attention span	33	45.8%	15	20.8%		
High level of attention span	10	13.9%	4	5.6%		
Min. – Max.	26.0-91.0		23.0-79.0		t =3.628*	<0.001*
Mean \pm SD	52.4 \pm 16.0		43.1 \pm 14.8			

F (p)	17.517* (<0.001*)	0.698 (0.499)		
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χ^2 : Chi square test MC: Monte Carlo

t: independent t- test

F: ANONA with repeated measures between pre, post1 and post in each group

* Statistically significant p-value at ≤ 0.05

Table (3): Comparison between the study and control groups according to overall quality of life before and after intervention

Overall Tool III: Student Quality of Life Assessment Questionnaire (SQLAQ)	Group A (study group) (n = 72)		Group B (control group) (n = 72)		Test of sig.	P
	No.	%	No.	%		
Pre test						
Low level of QOL	14	19.4	8	11.1	$\chi^2 = 3.536$	MC p= 0.176
Moderate level of QOL	56	77.8	58	80.6		
High level of QOL	2	2.8	6	8.3		
Min. – Max.	80.0-188.0		71.0-220.0		t = 1.139	0.257
Mean \pm SD	141.1 \pm 23.0		146.1 \pm 29.4			
Post 1						
Low level of QOL	1	1.4	4	5.6	$\chi^2 = 54.825^*$	<0.001*
Moderate level of QOL	27	37.5	64	88.9		
High level of QOL	44	61.1	4	5.6		
Min. – Max.	80.0-219.0		87.0-213.0		t = 10.031*	<0.001*
Mean \pm SD	188.9 \pm 28.1		147.3 \pm 21.2			
Post 2						
Low level of QOL	2	2.8	4	5.6	$\chi^2 = 33.710^*$	<0.001*
Moderate level of QOL	33	45.8	62	86.1		
High level of QOL	37	51.4	6	8.3		
Min. – Max.	80.0-219.0		87.0-220.0		t = 6.388*	<0.001*
Mean \pm SD	179.9 \pm 32.7		149.3 \pm 24.3			
F (p)	89.152* (<0.001*)		1.730 (0.181)			

χ^2 : Chi square test MC: Monte Carlo

t: independent t- test

* Statistically significant p-value at ≤ 0.05

F: ANONA with repeated measures between pre, post1 and post in each group

Table (4): Correlation between the study variables

		Group A (study group) (n = 72)			Group B (control group) (n = 72)		
		IA	Attention span	QOL	IA	Attention span	QOL
Post 1							
Internet addiction	r						
	p						
Attention span	r	-0.812*			-0.601*		
	p	<0.001*			<0.001*		
Quality of life	r	-0.905*	0.702*		-0.551*	0.484*	
	p	<0.001*	<0.001*		<0.001*	<0.001*	
Post 2							
Internet addiction	r						
	p						
Attention span	r	-0.729*			-0.371*		

	p	<0.001*			0.001*		
Quality of life	r	-0.472*	0.226		-0.241*	0.443*	
	p	<0.001*	0.056		0.041*	<0.001*	

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

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