

Problematic Internet Use, Problem Solving Skills and Emotional Regulation Among Junior High School Students

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Abstract

This research was designed to examine the relationship between Problem Solving Skills (PSS), Emotional Regulation (ER) and Problematic Internet Use (PIU) among junior high school students. As many as 137 students from SMPN 10 Surabaya in the even semester of academic year 2017/2018 were chosen as participants by using quota sampling method. Data was captured using Problem Solving Inventory (PSI), Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA) and Generalized Problematic Internet Use 2 (GPIUS2). Data that has been collected then analyzed using computer program SPSS version 24.00. The statistical results show that there are low but definite negative relationship between PSS and ER on PIU ($\beta = -0.18$ and $\beta = -0.21$, $p < 0.05$, respectively). PSS and ER overall explained the 10% variance of PIU. Based on the results, it can be concluded that the higher level of PIU, the lower level of PSS and ER that students have. Thus further, the current research finding will be discussed later.

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INTRODUCTION

The internet has become a part of life that can be enjoyed by all of people, including students. In general, students use the internet for gaming, searching, news, shopping, homework, music, talk, email, friends knowing, or meeting classes (Deniz, Mujgan, & Geyik, 2015; Tsai & Tsai, 2010; Yilmaz & Orhan, 2010). These various activities are always carried out every day and unconsciously make the use of internet as an addiction behavior. The dependence on internet is not without a reason, the internet is a tool that can facilitate daily activities effectively and efficiently (Puspita & Rohedi, 2018). Therefore, internet seems to be a part of life that cannot be separated from students in this digital era.

When students use the internet in a good and right portion, the use of internet will be able to support the implementation of teaching and learning activities in schools, for example looking for student material, exam preparation, and interaction media with teachers (Ali, 2014). However, it will be different if internet is used excessively and functionally, because this action will only guide students on problematic internet use (Mihara, et al. 2016; Young & De Abreu, 2017).

In general, problematic internet use (PIU) has equivalent words such as, pathological internet use, internet addiction, excessive internet use, compulsive internet use, or internet dependence (Caplan, 2003; Kuss & Griffiths, 2014; Kuss & Lopez-Fernandez, 2016; Odaci & Çelik, 2016; Young & De Abreu, 2017). Students who have shown problematic behavior of internet use will not realize that they are in a troubled condition. Davis (2001) explains that individuals who experience PIU will exhibit characteristics such as obsessive thoughts about internet, over tolerance of their own behavior, reduced self-control, unable to stop using internet and deprivation statements.

PIU that is left unchecked will cause various problems in the physical and psychological health of students (Belanger, Akre, Berchtold & Michaud, 2011; Choi, Park & Cha, 2017; George, 2016), and also will have an

impact on academic performance and criminal behavior if the level of student dependence on the internet is very high (Kim, Kim, Park, Kim, & Choi, 2017; Ko, Yen, Liu, & Al, 2009).

Problematic internet use behavior is basically a form of students' inability to choose good and right behavior choices. As explained by Capuzzi & Stauffer (2016) that the behavior shown by an individual is a choice of the results of thinking, acting and feeling. The inability of students to choose good choices is influenced by the low problem solving skills or abbreviated as PSS (Güçray, 2003).

PIU and PSS are also strengthened and weakened by the emotion regulation (ER) that is owned by students. Students who are unable to regulate their emotions well tend to solve their problems badly and divert their problems to something fun, such as the internet (Aldao, Nolen-Hoeksema & Schweizer, 2010; Caplan, 2010; Saptoto, 2010; Yildiz, 2017; Young & De Abreu, 2017).

This study aims to identify the level of PIU, PSS and ER that is owned by students, and to know the effect of PSS and RE on the emergence of PIU in students. Although research on this aspect has been carried out by many other researchers, there are still few researchers who review in terms of the age of children towards early adolescence (child to teenager). Whereas these age is times when children begin to look for their identity and self-existence that they will bring until they grow up, so it is important to identify the obstacles that students have as early as possible so that they do not have a negative impact on subsequent developments (Santrock, 2013).

METHODS

Quantitative methods with correlational design were used to achieve the objectives of this study. Participants were selected using a quota sample, from 150 instruments prepared to measure PIU, PSS and RE levels, only 137 instruments were returned. Therefore only 137 students were designated as participants in this study.

Based on table 1, it can be seen that the number of male participants was 47 students and was divided into three age ranges (13 years old = 18%, 14 years old = 9%, and 15 years old = 7%), while female participants numbered 90 students and divided into three age ranges (13 years old = 30%, 14 years old = 27%, and 15 years old = 9%).

Tabel 1. Distribution of Participant Data Based on Age and Sex

Age	Gender		Total of (%)
	M (%)	F (%)	
13	25 (18)	41 (30)	66 (49)
14	13 (09)	37 (27)	50 (36)
15	9 (07)	12 (09)	21 (15)
Σ	47 (34)	90 (66)	137 (100)

Note:
 M (male) and F (female)

All participants selected were students of Surabaya 10 Junior High School who were educated in the 2017/2018 academic year and used internet actively both via smartphone or PC. Data were collected using three standardized instruments adapted in Indonesian, namely GPIUS 2 (Generalized Problematic Internet Use), PSI (Problem Solving Inventory) and ERQ-CA (Emotion Regulation Questionnaire for Children and Adolescents). The following is a description of the three instruments:

1. Problematic Internet Use

GPIUS 2 consisted of 15 statement items that were used to measure the level of problematic internet use from cognitive aspects, internet use behavior, affective (mood), and negative impacts raised (Caplan, 2010). This instrument had five compilation indicators: (a) Preferences of online social interaction, ("I prefer online social interaction over face-to-face communication"); (b) Mood regulation, ("I have used the Internet to make myself feel better when I was down"), (c) Cognitive preoccupation, ("I would feel lost if I was unable to go online"); (d) Excessive internet use, ("I find it difficult to control my Internet use"); (e) Negative outcome, ("My Internet use has created problems for me in my life").

GPIUS2 had 7 Likert scale answer choices, 1 = "strongly disagree" to 7 = "strongly agree". Whatever the instrument's categories are as

followed: normal (≤ 21), mild (≤ 42), moderate (≤ 63), high (≤ 84), and high empathy (≤ 105). This instrument has an alpha coefficient score of 0.91.

2. Problem Solving

PSI consisted of 35 statement items that were used to measure the level of problem solving skills from aspects of self-confidence, style of dealing with problems and self-control (Heppner & Petersen, 1982). This instrument had three compiler indicators: (a) Problem solving confidence, ("Many problems I face are too complex for me to solve"); (b) Approach avoidance style, ("When a solution to a problem is unsuccessful, I do not examine why it did not work"); (c) Personal control, ("I make snap judgments and later regret them").

PSS had 6 points Likert scale answers (1 = "Very Not Correct" to 7 = "Strongly Agree") with an alpha coefficient score of .90. The instrument's categories were divided into 5 as followed: very low (≤ 42), low (≤ 84), medium (≤ 126), high (≤ 168), and very high (≤ 210).

3. Emotional Regulation

ERQ-CA consisted of 10 statement items that were used to measure the level of emotional regulation held by students (Gullone & Taffe, 2012). Consisting of two compilation indicators: (a) Cognitive reappraisal, ("I control my felling about things by changing the way I think about them"); (b) Expressive suppression, ("I keep my felling to myself"). ERQ-CA had 5 likert scale answers (1 = strongly disagree to 5 = strongly agree) with an alpha coefficient score of .79. The instrument categories were as followed: very low (≤ 18), low (≤ 26), medium (≤ 34), high (≤ 42) and very high (≤ 50).

Data that had been collected was then analyzed descriptively to determine the level of PIU, PSS and RE that was owned by students, and tested its influence with regression hierarchy to see the relationship between variables.

RESULTS AND DISCUSSION

Based on the data in table 2, it can be seen that all of students experience PIU with low to

very high categories, and the majority are in the high category. PSS distribution data also shows that students have a level of problem solving skills ranging from very low to average categories, with

the largest number of distributions in the low category. Students also have a low to very high category of emotion regulation (ER), with the highest average distribution in the high category.

Tabel 2. Problematic Internet Use, Problem Solving Skills and Emotional Regulation on Students Based on Age and Sex

Category	Sex										Σ of Total	Percent of total
	Male					Female						
	13	14	15	Σ	%	13	14	15	Σ	%		
PIU												
Very high	3	3	0	6	4	4	4	4	12	09	18	13
High	9	4	5	18	13	16	14	5	35	26	53	39
Average	11	5	3	19	14	15	9	2	26	19	45	33
Low	2	1	1	4	03	7	10	0	17	12	21	15
Normal	0	0	0	0	0	0	0	0	0	0	0	0
PSS												
Very high	0	0	0	0	0	0	0	0	0	0	0	0
High	0	0	0	0	0	0	0	0	0	0	0	0
Average	3	1	3	7	05	3	0	1	4	03	11	08
Low	15	7	5	27	20	29	27	9	65	47	92	67
Very low	7	5	1	13	09	9	10	2	21	15	34	25
ER												
Very high	6	2	6	14	10	12	6	6	24	18	38	28
High	10	4	2	16	12	16	19	5	40	29	56	41
Average	5	4	0	9	07	6	11	0	17	12	26	19
Low	4	3	1	8	06	7	1	1	9	7	17	12
Very low	0	0	0	0	0	0	0	0	0	0	0	0

Correlation test results in table 3 show a significant negative relationship between PIU and PSS and ER. The statistical results provide an initial description that PSS and ER can predict the level of PIU that is owned by students. Table 3 also explains that PSS has a weak and positive correlation with ER. As for age and sex not correlated with PSS and PIU, only ER is correlated with age.

are controlled by PSS and ER, PSS and ER can significantly predict the level of PIU owned by students ($\Delta R = 0.23$; $F = 4.13$, $p < 0.01$). In addition, it can also be seen in the model 2 column that PSS and ER in fact have a negative effect on PIU ($\beta = -0.18$ and -0.21 , $p < 0.05$, respectively). The magnitude of the effect of PSS and ER on the variants of PIU in table 4 can be known as 11% ($\Delta R^2 = 0.11$, $p < 0.01$).

The result of hierarchical regression analysis in table 4 explains that when sex and age

Tabel 3. Correlation of Problematic Internet Use, Problem Solving Skills dan Emotional Regulation, Age and Sex

		1	2	3	4	5	M	SD	α
(1)	PIU	-					62.61	16.95	0.91
(2)	PSS	-0.244** (0.002)	-				71.83	18.78	0.90
(3)	RE	-.260** (0.001)	.358*** (0.000)	-			37.20	7.62	0.76
(4)	Sex	-.082 (0.17)	-.056 (0.23)	.04 (0.32)	-		1.66	.48	
(5)	Age	.061 (0.24)	.044 (0.31)	.15* (0.03)	.01 (0.44)	-	13.67	.73	

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

These results can be interpreted that with the control of predictor variables (PSS and ER), the level of PIU experienced by students can be

dropped. The interpretation of these results is supported by the results of previous studies that explain PIU, PSS and ER have relationships that

can influence each other (Ekinci, 2014; Koo & Kwon, 2014; Saptoto, 2010).

Table 4. Hierarchical Regression Analysis of Problematic Internet Use, Problem Solving Skills and Emotional Regulation, Age and Sex

Predictor	Model 1		Model 2	
	β	t	β	t
Age	0.06	0.73	0.10	1.23
Sex	-0.08	-0.96	-0.08	-1.04
PSS			-0.18	-2.03*
ER			-0.21	-2.34*
ΔR				0.23
ΔR^2				0.11
ΔF				7.46**
R		0.10		0.33
R^2		0.01		0.10
F		0.72		4.13**

Note: * $p < 0.05$; ** $p < 0.01$
 Variabel Dependent: PIU

ER can affect the increase of PIU because students actually want to fulfill the need for happiness and reduce or avoid sadness, anxiety, or fear (negative emotion) from their suffering experienced (Koole, 2009; Yildiz, 2017). In other words, the momentary pleasure that they get from using internet makes them intensively and repeatedly release negative emotions on the internet and make it as a negative addiction.

The pleasures they feel then lead to tolerance towards excessive internet usage, from the first one hour, increasing to 2 hours and so on (Young & De Abreu, 2017). Furthermore, when students have felt pleasure on the internet, there will be a strong and uncontrolled desire to continuously use the internet (Caplan, 2010). Instead of wanting to reduce negative emotions in the problems experienced, but in fact the problems they experienced actually got heavier and raised new problems.

The transfer of students' problems to problematic internet use is closely related to the role of PSS (Ekinci, 2014). This statement was reinforced by the theory that explained about PIU emerged as a form of transferring problems that could not be solved (Güçray, 2003). Students with low PSS are unable to choose good and right problem solving alternatives (Tallman, et al. 1993). The inability of students to choose alternative solutions to their problems is also influenced by students' low social support (Ghanbari-hashemabadi, et al. 2013).

This lack of social support will further aggravate the negative emotions that are felt in a problematic situation and eliminate the power to immediately solve the problem (Ghanbari-hashemabadi, et al. 2013). Students will tend not to have confidence in dealing with the problems they are experiencing, not wanting to face problems directly, and finally making control of themselves weaker (Heppner & Petersen, 1982). Therefore, when students think that the internet is able to reduce negative emotions and eliminate the burden of the problems instantly, then the internet is what they ultimately choose as the escape way of problems. As explained by Juneja and Sethi (2015), that online social networks and the internet are media in managing the burden of problems and negative emotions such as loneliness, stress, depression, and anxiety. Theoretically the results of this study can strengthen the results of previous studies which explain that PSS and ER are predictors or triggers of PIU.

CONCLUSION

Daily internet use by students directs them to dependency behavior on the internet which has an impact on problematic internet use. In addition, the use of the internet in daily activities is also closely related to the low skills of emotional regulation and problem solving.

The results of this study in general have revealed the relationship and influence of PSS and ER on the level of PIU students. Considering the results of statistical tests and discussions, identifying as early as possible and providing interventions for students who experience low PSS and ER, and high PIU is important to be done by therapists (counselors or psychologists) in future research.

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