

Development of a Measure: Reasons of Social Networking Sites Use

Samira Ranaiey¹, Mohammad Reza Taghavi² & Mohammad Ali Goodarzi²

¹ Department Of Clinical Psychology, Shiraz, Iran

² Department Of Clinical Psychology, Shiraz University, Shiraz, Iran

Correspondence: Samira Ranaiey, Department Of Clinical Psychology, Shiraz, Iran. E-mail: Samira_ranaie@yahoo.com/Mtaghavi@rose.shirazu.ac.ir/mgoodarzi@rose.shiraz.au.ir

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Abstract

Because of increased attention to PIU (Problematic Internet Use), some measure had been made, but they seem to be

Inadequate, due to new issue of the internet interactions. Therefore the necessity and importance of Standard, valid and reliable tools to assess PIU and the related behaviors are clear.

This paper presents results of a study that develops a measure of Reasons of Using Social Networking Sites (S.N.S). The reasons were based on an article by Morahan – Martin and Schumacher. The reasons were arranged as a questionnaire. This questionnaire was completed by 156 volunteer students of Shiraz University. The results indicated that Reasons of S.N.S Use Scale is both reliable and valid. The result of factor analysis showed that two dimensions (Positive and Negative reasons of S.N.S use) explains total variance acceptably.

Keywords: social networking sites, internet behaviors scale, validity, reliability, problematic internet use

1. Introduction

Many studies had documented that social Networking Sites (S.N.S) has pathological effect on its users. Problematic Internet use (PIU) is a multi-dimensional syndrome, causing cognitive and behavioral symptoms, which results in negative, social, academic and professional consequences. (Caplan, 2002; Caplan 2003; Davis, 2001; Morahan – Martin, Schumacher, 2003)

In recent years due to increased attention to PIU, some tools had been made for its evaluation that seem as inadequate, which is probably due to new issue of the virtual world in the field of psychology. The importance of new and efficient tools for psychological research in the virtual world increasingly felt.

In 2003, Morahan-Martin and Schumacher in a survey about differences between lonely and non-lonely over reasons of internet use suggested 17 different reasons for internet use.

The paper then was used as a source repeatedly by researches (including The Author) but no validity and reliability for Reasons of Internet Use was reported. In this article we try to set that 17 reasons as a scales and evaluate reliability and validity and find sub-dimension of this scale. (This scale was used in survey that conducted by Author, titled as: “The Effect of loneliness on social Networking sites and its related behaviors”. The article was submitted to Global Journal of Health science and the submission was accepted).

2. Literature Review

A number of scholars have noted the need for theoretical accounts, along with valid and reliable tools, to evaluate how psychological wellbeing associated with PIU. One of the tools which was used in a study conducted by Caplan(2007) is “Negative outcome of internet use”, The Survey items used to operationalize negative outcome, associated with one’s internet use, were drawn from measures employed in previous studies (Caplan, 2002; Caplan 2005; Morahan-Martin, Schumacher 2003). Participants extend their agreement on a scale from 1 to 5. (strongly disagree to strongly agree), with three statement indicating that they had experienced negative out come due to their internet use. In that study reliability coefficient for negative outcomes reported $\alpha=0.70$.

Preference for online social interaction (Leung, 2011) was measured by using 13 item based on Caplan(2002, 2003) studies on the preference for online social interaction (Leung, 2011). A 5 point Licart type scale was used

1=strongly disagree and 5= strongly agree. Sample items included feel safer relating to: “having online interactions rather than face to face”, “Treated better online than in face to face relationship”, “More confident socializing online than offline”, “More comfortable with computer than people” “I am willing to give up some of my face to face relationship to have more time for My online relationship” and “I am happier being online than I am offline” Reliability alpha was as high as, 0.83.

To assess Facebook Groups uses and gratifications respondents were given a list of 16 statements regarding Facebook group (Park et al, 2009) They rated their level of agreement with specific reasons for using Facebook groups including information, acquisition about campus community, entertainment, recreation, social interaction with friends and family and peer pressures self-satisfaction (1 strongly agree, 6 strongly disagree).

The statements were adapted from cluster of the categorized dimension describing online group participants (Lin HF 2006; Rinding, Gefen, 2004).

Addictive tendencies scale (Wilson et al, 2010) based on previous research (Walsh et al, 2007; Ehrenberg, et al, 2008). The addictive tendencies scale ($\alpha=0.76$) Comprised three items measuring level of salience: one of the first thing I do each morning is log on to a Social Networking Site (e.g. My space or Facebook), withdrawal (I feel lost when I cannot access my social networking site (e.g. My space or Facebook) and loss of control (I find it hard to control my use of social networking sites (e.g. my space or Facebook).

These were some examples of tools which had been using by researchers to examine problematic Internet Use (PIU).

This study attends to arrange the positive and negative reasons of using S.N.S (due to submission) as a scale, and evaluate reliability and validity.

3. Method

3.1 Participant

Reasons for internet use scale were given to 156 Shiraz university students. Of these 146 (93.6%) had experienced S.N.S use and were include in the research. 108 (62.2%) were female and 42 (26.9%) were male. The sample included 11(7.1%) Freshmen, 34 (21.8%) Sophomore, 30 (19.2%) juniors, 6 (3.8%) Seniors, 41 (26.3%) graduate student and 31 (19.9%) PHD students. Mean age of participants was 24.59 (S.D= 5.34). Participants had reported average weekly use as 18.01 hours (SD=20.39).

3.2 Measure

The questionnaire completed by the participants, included demographic characteristic, S.N.S experience, Reasons for S.N.S use Scale.

Those participants who had S.N.S use experience included in the study.

3.3 Item Origin – Selection Process

The reasons were chosen based on the 17 reasons presented by Morahan – Martin – Schumacher (2003). The arranged scale includes 17 Likert – type question (regarding reasons) and four–point score with 1: Strongly disagree and 4 strongly agree.

3.4 Psychometric Support

For Evaluating reliability: coefficient α and test –retest will be conducted. For evaluation of validity explanatory factor analysis and convergent and discriminant validity will be conducted.

3.5 Ethics

Ethical approval: All procedures performed in studies involving human participants were in accordance with ethical standards of institutional and national research committee with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Informed consent was obtained from all individual participants included in this study.

4. Results

4.1 Reliability

4.1.1 Coefficient α

Reliability α was as high as $\alpha=0.786$ for negative reasons and $\alpha=0.813$ for positive reasons.

4.1.2 Test – Retest Method

The scale of Reasons of Social Networking Sites Use was given to 30 Shiraz university students and after 3 weeks the same test was conducted. Table 4-1 provides the descriptive statistics (Mean \pm SD) for subscales scores. We used correlated samples t-test to formally test whether means are similar. A Pearson's correlation is computed to assess test-retest reliability. Note means are similar, and this table indicates that the correlation of the two scores (per subscale) is high and positive so there is strong support for the test-retest reliability.

Table 1. Results of test – retest

Dimensions	First time	Second time	The difference between first and second time	P value	Correlation p- value
Positive reasons	19.78 \pm 3.68	19.59 \pm 4.12	.19 \pm 1.66	.568	.915(.000)
Negative reasons	22.26 \pm 5.72	22.11 \pm 6.57	.15 \pm 4.03	.85	.794(.000)

4.2 Validity

4.2.1 Factor Analysis

Exploratory factor analysis (Principal component method with Varimax rotation) was conducted, with two dimension (Positive and negative reasons of S.N.S Use). These two dimensions explain 42.3% of the total variation of the scale. Results presented in table 4-2.

Table 2. Results of exploratory factor analysis for Reasons for Internet Use Scale

Total Variance Explained											
Component	Initial Eigen values			Extraction Sums of Squared Loadings				Rotation Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %		
1	4.972	29.249	29.249	4.972	29.249	29.249	4.383	25.782	25.782		
2	2.219	13.054	42.304	2.219	13.054	42.304	2.809	16.521	42.304		
3	1.584	9.320	51.623								
4	1.431	8.420	60.044								
5	1.270	7.472	67.516								
6	1.083	6.373	73.889								
7	.788	4.632	78.522								
8	.732	4.305	82.826								
9	.654	3.847	86.673								
10	.446	2.623	89.296								
11	.394	2.317	91.613								
12	.358	2.103	93.716								
13	.318	1.869	95.585								
14	.232	1.365	96.950								
15	.202	1.190	98.140								
16	.188	1.104	99.244								
17	.128	.756	100.000								

Extraction Method: Principal Component Analysis.

According to the second table (4-3) all of the items located in relevant dimensions.

Table 3. Rotated component matrix

	component	
	1	2
b1	.344	.429
b2	-.077	.785
b3	-.419	.422

b4	.622	-.172
b5	-.640	.231
b6	.541	-.034
b7	-.416	.292
b8	.114	.721
b9	-.469	.535
b10	.493	-.209
b11	-.141	.691
b12	.736	-.067
b13	.712	.089
b14	.571	.051
b15	.511	-.037
b16	-.734	.119
b17	-.387	.551

4.2.2 Convergent Validity and Discriminant Validity

To evaluate validity of Reasons of S.N.S Use Scale convergent and discriminated validity was assessed. Result presented in table 4.

Table 4. Convergent Validity and Discriminant validity of Reasons of S.N.S Use Scale

Dimensions	Items	Discriminant validity ^b		Convergent validity ^a	
		Range of correlation	of Scaling (percent)	Range of correlation	of Scaling (percent)
Positive reasons	6	0.175-0.402	6/6 (100)	0.643-0.758	6/6 (100)
Negative reasons	11	0.057-0.54	8/11 (73)	0.316-0.831	9/11 (82)

a- Number of correlations between items and hypothesized scale corrected for overlap ≥ 0.4 / total number of convergent validity test.

b- Number of convergent correlations significantly higher than discriminant correlations / Total number of correlations.

These finding show that scaling success rate for convergent validity is 100% for positive reasons and 82% for negative reasons.

The success rate for discriminant validity of Reasons for S.N.S Use in 82.35% (14/17) As the results indicate overall validity for the static method of S.N.S use is acceptable (this convergent and discriminant validity) Method based on fayars, 2000)

4.3 Scoring

This scale includes 17 Likert type questions with four point scale, 1: strongly disagree and 4 strongly agree. The Scale has 7 positive reasons for S.N.S and 10 negative one, this scale has two dimensions: positive and negative reason for S.N.S Use, according to factor analysis. Total score for each dimension maybe computed by summing all items (in each dimension).

Positive reason for S.N.S Use may be computed by summing items scores: 1,2,3,8,9,11,17 and negative reason for S.N.S use May be computed by summing item score:4,5,6,7,10,12,13,14,15,16.The mean \pm SD for positive reasons in this survey was 17.70 ± 4.9 .The mean \pm SD for negative reasons of S.N.S Use in this study was 23.9 ± 9.33 . Time required for this scale is 5 minute.

4.4 Score Interpretation

A higher score in each dimension indicated a greater degree of S.N.S Use for positive or negative reasons.

5. Discussion

Reasons of Social Networking Sites Use scale as the results indicate showed acceptable reliability and validity with Iranian students. The results of exploratory factor analysis indicated two aspects, positive reasons and negative reasons, explain total variation acceptably.

6. Conclusion

A number of researchers have noted the need for standard scales to assess internet behaviors along with more empirical evidence. Reasons of Social Networking Sites Use scale could be a helpful device to evaluate PIU and its related behaviors. It is important that validity and reliability of this scale be measured by other means. It is also suggested that the scale, being evaluated on more diverse population.

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Appendix

Appendix A

Reasons (positive and negative) for internet use scale

- 1- I use S.N.S to communicate with friends and family. (+)
 - 2- I use S.N.S for required course work. (+)
 - 3- I use S.N.S for recreation. (+)
 - 4- I feel relaxed just by using S.N.S. (-)
 - 5- I use S.N.S to find job most of time. (-)
 - 6- I make new friendship just by using S.N.S (-)
 - 7- I talk to others who share common interests only through S.N.S. (-)
 - 8- I use S.N.S for staying abreast of new development in areas of interests. (+)
 - 9- I use S.N.S for sharing ideas or fantasies. (+)
 - 10- I use S.N.S for wasting time. (-)
 - 11- I use S.N.S for finding information for own use. (+)
 - 12- I use S.N.S seeking emotional supports. (-)
 - 13- I use S.N.S for gambling (-)
 - 14- I use S.N.S for net resources
Intended for adults only. (-)
 - 15- I use S.N.S for games. (-)
 - 16- I just use S.N.S for virtual Reality. (-)
 - 17- I use S.N.S for browsing. (+)
- + marks positive reasons
-marks negative reasons

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