

A Preliminary Study on the Factors Leading Youth Toward Network Dependence

Mamoru Fukumori^{a*} and Takehiko Saiki^b

^aDepartment of Human Nutrition, Faculty of Contemporary Life Science, Chugokugakuen University, Okayama 701-0197, Japan

^bDepartment of English Communication, Chugoku Junior College, Okayama 701-0197, Japan

This preliminary study attempts to explore the correlation between university students' dependency on network communication and their relationship with their mothers. The results of the study clearly indicate that the relationship with one's her mother is one of the strongest factors that cause someone to become dependent on network communication. Also, the results of the factor analysis show that the following three factors comprise the image-structure of network dependency: 1) "Trust and Fondness", 2) "Respect" and 3) "Anxiety for Separation."

Key Words: network dependency, cellular phones, mother-child relation

Introduction

As the Internet and the cellular phones have quickly become ubiquitous there appear to be a number of people who are heavily dependent on these communication devices. Like other dependencies (e.g., alcohol and gambling), what may be called "Network" dependence is also becoming a serious social problem. This network dependence is most apparent among the youth in Japan. As for their dependence upon the cellular phone, one of our studies (not yet published) finds that more than 70% of our sample population either sent or received more than 10 emails in a day. As for the Internet, about 70% of the population showed some interest in the sites where dating is arranged for people in need, and about 50% have actually visited the sites. Moreover, about 10% of those

sampled use the Internet engage in online chat everyday. The number who have spent three hours in a raw chatting with others amounted to about 50%.

The results of our study also indicated that an increasing number of young people use these communication devices for much longer periods than they should, often making them an impediment in their daily lives. Some of them even suffer from anxiety when they do not have their cellular phone with them. There is no doubt that the Internet and the cellular phones are convenient tools for communication. However, attention should be directed toward "network dependency" as a threat to youth and society in general.

Although Kimbary Young and many other scholars have explored the concept of network dependence, a clear and standardized definition of network dependence has yet to be agreed upon. In addition, as there are some characteristics that make it difficult to interpret within the framework of traditional dependencies, a systematic study that focuses solely on network dependence is needed. To be more specific, there are three different general factors for dependence: material, process and relationship. We can easily see that network dependence involves all three

*Corresponding author.

Mamoru Fukumori

Department of Human Nutrition, Faculty of Contemporary Life Science,
Chugokugakuen University, 83, Niwase, Okayama 701-0197,

Japan

Tel & FAX; +81 86 293 0247

factors. We depend on a personal computer or cellular phone as the material, online communication as the process, and interpersonal transactions with others as forming the relationship.

Generally speaking, one's dependence is rooted in the mother-child relationship that begins at birth. In the early stage of infancy, a "good mother" who grants baby's wants and a "bad mother" who does not are not differentiated. For this reason, the image of mother tends to become divided rather than integrated. Melany Cline considers this a crucial stage of the mother-child relationship calling it "delusive and schizophrenic position." Before long, the divided images of mother are integrated and a stable image of mother is obtained. If this process of integration is not secured smoothly, a baby will have difficulty distancing itself from the mother and will develop senses of craving for love from the mother. This craving for love will have a significant influence upon one's tendency to depend on others as the person grows up.

This present study assumes that one's network dependence may also be a result of the maternal relationship. From this perspective, we will examine some factors that might regulate one's tendency toward network dependency, focusing on the correlation between network dependency and the mother-child relationship.

Methodology

A list of twenty items was constructed showing attitudes and emotions toward one's mother and the relationship with her. The subjects were asked to mark an appropriate spot on the five point scale: 1 being NOT very much and 5 very much.

- 1) My mother and I have similar personality and hobbies.
- 2) I have a lot to learn from my mother.
- 3) My mother has many qualities that I do not have.
- 4) My mother and I are more like friends.
- 5) My mother often lets me have my own way.
- 6) My mother often encourages me.
- 7) I often spend time together with my mother.
- 8) I sympathize with the way my mother lives.
- 9) My mother is someone I respect.
- 10) There is not much to talk about with my mother.
- 11) My mother interferes with me too much.
- 12) I want to see my mother when I am anxious.
- 13) My mother is on good terms with my father.
- 14) I wouldn't care much for my mother.
- 15) My mother is less attractive than mothers of my friends.
- 16) My mother is someone I can count on.
- 17) My mother is open to who I am.
- 18) I consult with my mother when in trouble.
- 19) I want to live near her for good.
- 20) I can't understand what my mother thinks.

With the above list of 20 items, a study was conducted with a group of 21 college students who have a strong tendency toward network dependency and another group of 30 who do not have such a tendency. Two criteria were used for deciding group membership: 1) one's perception that he or she is not leading a normal life due to time spent for online communication, and 2) one's perception that he or she cannot help communicating with others through the Internet or the cellular phone. If a subject has two perceptions as they are, then he or she belongs to the former.

The results and Interpretations of the Survey

Principal Component Analysis was conducted on all the 20 items mentioned above. Table 1 shows the Eigenvalues of each item. Interpretations were given assuming a three-factor structure from the screeplot of the eigenvalues. There is a reason why three factors were assumed here. Initially, we obtained seven factors, as a result of an analysis with the eigenvalue 1 as is often suggested. We considered this number to be too many since they might make it difficult to obtain any sound interpretations. We therefore decided to proceed with these three factors, knowing that the cumulative contribution ratio is rather low; about 50%.

Table 2 indicates the loaded values of each of the three factors. The three factors were interpreted as follows: 1) Trust and Fondness [variance 27.3%], 2) Respect [variance 12.0%] and 3) Anxiety for Separation [variance 10.5%]. While each of the cumulative values is not high, it is safe to say that the correlation between the dependency on network communication and one's relation with their mother can be interpreted from the perspectives of "Trust-Fondness," "Respect" and "Anxiety for Separation" and that there are significant similarities to other dependences.

With stepwise applying to the 20 items, another test was conducted to see the differences between the two

Table 1. Eigenvalues

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	5.468	27.339	27.339	5.468	27.339	27.339
2	2.402	12.009	39.348	2.402	12.009	39.348
3	2.100	10.498	49.846	2.100	10.498	49.846
4	1.301	6.505	56.350			
5	1.262	6.311	62.661			
6	1.133	5.664	68.325			
7	1.023	5.116	73.440			
8	.847	4.368	77.809			
9	.779	3.897	81.705			
10	.698	3.492	85.198			
11	.570	2.852	88.050			
12	.482	2.412	90.461			
13	.434	2.168	92.629			
14	.354	1.769	94.398			
15	.308	1.538	95.935			
16	.224	1.122	97.057			
17	.208	1.038	98.095			
18	.201	1.005	99.100			
19	.111	.554	99.654			
20	6.910E-02	.346	100.000			

Table 2. Component matrix

	Component		
	1	2	3
Item 01	.339	-5.672E-04	-.495
Item 02	.224	.775	.356
Item 03	.344	.711	.255
Item 04	.614	-.420	.459
Item 05	-.322	-2.231E-02	8.419E-02
Item 06	.532	-.171	-2.915E-03
Item 07	.677	-.487	.197
Item 08	.424	.623	.304
Item 09	.756	7.841E-02	-.273
Item 10	-.639	.462	-.298
Item 11	-.605	-.161	-4.763E-02
Item 12	-4.577E-02	-.118	.504
Item 13	.383	.342	-.317
Item 14	-.512	.182	-.409
Item 15	-.492	-2.542E-02	.325
Item 16	.695	.144	-.188
Item 17	.563	-.167	-.305
Item 18	.656	6.076E-02	.140
Item 19	-5.831E-02	-4.634E-02	-.505
Item 20	-.741	-3.150E-02	.342

Table 3. Classification results

		Predicted group membership		Total
		1.00	2.00	
Original	Count	1.00 30	2.00 0	30
		2.00 1	1.00 20	21
Original	%	1.00 100.0	2.00 .0	100.0
		2.00 4.8	1.00 95.2	100.0

Table 4. Casewise statistics

	Actual group	Predicted group	Squared mahalanobis distance	Discriminant scores
1	1	1	.136	2.039
2	1	1	.307	1.115
3	1	1	.040	1.871
4	1	1	.749	2.535
5	1	1	.556	2.416
6	1	2	3.626	-.481
7	1	1	2.186	.191
8	1	1	5.056	3.918
9	1	1	1.359	2.836
10	1	1	.027	1.507
11	1	1	.330	1.096
12	1	1	.010	1.770
13	1	1	.041	1.468
14	1	1	.723	2.520
15	1	1	.407	2.308
16	1	1	1.023	2.681
17	1	1	.000	1.651
18	1	1	.274	1.147
19	1	1	.873	.736
20	1	1	2.511	.085
21	1	1	3.613	-.231
22	1	1	.413	1.027
23	1	1	.000	1.677
24	1	1	1.900	3.048
25	1	1	1.363	.502
26	1	1	.284	1.137
27	1	1	.046	1.457
28	1	1	1.438	2.869
29	1	1	6.222	4.164
30	2	2	.402	1.036
31	2	2	1.590	-1.125
32	2	2	.000	-2.383
33	2	2	.680	-3.210
34	2	2	1.745	-1.064
35	2	2	.271	-1.865
36	2	2	.831	-1.474
37	2	2	.825	-3.294
38	2	2	.006	-2.305
39	2	2	.092	-2.082
40	2	2	.516	-3.104
41	2	2	2.980	-4.112
42	2	2	1.471	-3.599
43	2	2	.001	-2.421
44	2	2	.047	-2.169
45	2	2	.144	-2.765
46	2	2	.170	-1.974
47	2	2	.001	-2.357
48	2	2	.093	-2.690
49	2	2	.288	-1.849
50	2	2	.329	-1.812
51	2	2	.003	-2.444

aforementioned groups: one consisting of people who have a tendency toward network communication dependency and the other with people who do not have such a tendency. The result of the test shows one interesting finding. As Table. 3 indicates, the following items, Item 1 (My mother and I have similar personality and hobbies.), Item 3 (My mother has many qualities that I do not have.), Item 5 (My mother often lets me have my own way.), Item 7 (I often spend time together with my mother.), Item 9 (My mother is someone I respect.), Item 18 (I consult with my mother when in trouble.), and Item 20 (I can't understand what my mother thinks.), yielded a significantly high ratio of discrimination, 98%. Table. 4 shows the result of each case.

Conclusion

The results obtained through this current study demonstrate some important correlations between one's dependency toward network communication and his/her relation with the mother. We conclude therefore that

one's relationship with their mother is one of the strongest factors that cause an individual to become dependent on network communication. Finally, while it is recommended that network dependency be further explored as an independent field of study, it is also commendable that both the similarities and differences that may exist between Network Dependence and more generic Communication Dependence should be examined thoroughly.

Reference

1. Rice RE. (1984). Mediated group communication; In *The New Communication, Research and Technology*, Rice RE ed, SAGE Publications, Beverly Hills, CA., pp 925-944.
2. Tetsuya Shibui (2003). Chat Dependence Syndrome. *Kyouiku Siryou Syuppankai*.
3. Mamoru Fukumori and Takehiko Saiki. (2002). Cellular Phone E-mailing as an Important Communication Tool: A Preliminary Study. *CHUGOKUGAKUEN journal*, Vol 1, pp 1-5.
4. Yong, K. S. (1998). *Caught in the Net*. John Wileys & Sons.

Accepted March 31, 2004.