CHILDREN'S INTERNET ADDICTION, FAMILY-TO-WORK CONFLICT, AND JOB OUTCOMES: A STUDY OF PARENT–CHILD DYADS

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Appendix A

Measurement Items

Internet addiction (reported by children) (1 strongly disagree; 7 strongly agree; adapted from Turel, Serenko, and Giles 2011)
1. I sometimes neglect important things because of my interest in the Internet.
2. My social life has sometimes suffered because of my use of the Internet.
3. Using the Internet sometimes interfered with other activities.
4. When I am not using the Internet I often feel agitated.
5. I have made unsuccessful attempts to reduce the time I use the Internet.
6. I am sometimes late for engagements because of my use of the Internet.
7. Arguments have sometimes arisen because of the time I spend online.
8. I think that I am addicted to the Internet.
9. I often fail to get enough rest because of my use of the Internet.

Parent's perception of child's Internet addiction (1 strongly disagree; 7 strongly agree; adapted from Turel, Serenko, and Giles 2011)
1. My child sometimes neglects important things because of his/her interest in the Internet.
2. My child's social life has sometimes suffered because of his/her use of the Internet.
3. Using the Internet sometimes interfered with my child's other activities.
4. When my child is not using the Internet he/she often feels agitated.
5. My child has made unsuccessful attempts to reduce the time he/she uses the Internet.
6. My child is sometimes late for engagements because of his/her use of the Internet.

7. Arguments have sometimes arisen because of the time my child spends online.
8. I think that my child is addicted to the Internet.
9. My child often fails to get enough rest because of his/her use of the Internet.

Parent–child attachment (1 almost never or never true; 7 almost always or always true; adapted from Armsden and Greenberg 1987)
1. My parents respect my feelings.
2. I feel my parents are successful as parents.
3. I wish I had different parents. (Reverse coded)
4. My parents accept me as I am.
5. I have to rely on myself when I have a problem to solve. (Reverse coded)
6. I like to get my parents' point of view on things I'm concerned about.
7. I feel it's no use letting my feelings show. (Reverse coded)
8. My parents sense when I'm upset about something.
9. Talking over my problems with my parents makes me feel ashamed or foolish. (Reverse coded)
10. My parents expect too much from me. (Reverse coded)
11. I get upset easily at home. (Reverse coded)
12. I get upset a lot more than my parents know about. (Reverse coded)
13. When we discuss things, my parents consider my point of view.
14. My parents trust my judgment.
15. My parents have their own problems, so I don't bother them with mine. (Reverse coded)
16. My parents help me to understand myself better.
17. I tell my parents about my problems and troubles.
18. I feel angry with my parents. (Reverse coded)
19. I don't get much attention at home. (Reverse coded)
20. My parents encourage me to talk about my difficulties.
21. My parents understand me.
22. I don't know whom I can depend on these days. (Reverse coded)
23. When I am angry about something, my parents try to be understanding.
24. I trust my parents.
25. My parents don't understand what I'm going through these days. (Reverse coded)
26. I can count on my parents when I need to get something off my chest.
27. I feel that no one understands me. (Reverse coded)
28. If my parents know something is bothering me, they ask me about it.

Parental control (1 strongly disagree; 7 strongly agree; adapted from Bumpus and Werner 2009)
1. I limit the amount of time my child spends online.
2. I use filtering software to restrict the types of web sites my child is allowed to view.
3. My child has to ask for my permission before using the Internet.
4. I set up restrictions on the child's use of Internet tools (e.g., no use of chat rooms).
5. I permit my child to use the Internet for specific purposes only (e.g., educational purposes or school projects).
6. I require my child to complete his/her homework before going online.
7. I restrict my child's ability to download programs or content from the Internet.
8. I set up rules pertaining to the protection of my child's privacy on-line.

Monitoring (1 strongly disagree; 7 strongly agree; adapted from Bumpus and Werner 2009; Xu et al. 2012)
1. I check whether my child is using the Internet when I am out.
2. I check computer history to monitor web sites my child visited.
3. I always accompany my child when he/she uses the Internet.
4. I monitor what my child does online.
5. I know well as to what my child does online.

Unstructured time (1 strongly disagree; 7 strongly agree; self-developed[1])
1. Outside school hours, my child has plenty of free time.
2. Outside school hours, my child does not have any scheduled activities (e.g., homework, interest class) most of the time.
3. Outside school hours, my child always has plenty of time when he/she can do whatever he/she wants.

Dissuasion (1 strongly disagree; 7 strongly agree; adapted from Xu et al. 2012)
1. I constantly remind my child not to use the Internet.
2. I dissuade my child from using the Internet.
3. I warn my child not to keep using the Internet.
4. I intervened my child's Internet use at an early stage.

Rationalization (1 strongly disagree; 7 strongly agree; adapted from Xu et al. 2012)
1. I educate my child about the consequence of excessive Internet use.
2. I show educational videos to my child to help him/her to realize the consequence of excessive Internet use.
3. I use examples from the media and news report to help my child realize the consequence of excessive Internet use.
4. I educate my child about the symptoms of excessive Internet use.

Work-to-family conflict (1 strongly disagree; 7 strongly agree; adapted from Carlson et al. 2000)
Time-based work interference with family
1. My work keeps me from my family activities more than I would like.
2. The time I must devote to my job keeps me from participating equally in household responsibilities and activities.
3. I have to miss family activities due to the amount of time I must spend on work responsibilities.
Strain-based work interference with family
1. When I get home from work I am often too frazzled to participate in family activities/responsibilities.
2. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family.
3. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.
Behavior-based work interference with family
1. The problem-solving behaviors I use in my job are not effective in resolving problems at home.
2. Behavior that is effective and necessary for me at work would be counterproductive at home.
3. The behaviors I perform that make me effective at work do not help me to be a better parent and spouse.

Family-to-work conflict (1 strongly disagree; 7 strongly agree; adapted from Carlson et al. 2000)
Time-based family interference with work
1. The time I spend on family responsibilities often interfere with my work responsibilities.
2. The time I spend with my family often causes me not to spend time in activities at work that could be helpful to my career.
3. I have to miss work activities due to the amount of time I must spend on family responsibilities.
Strain-based family interference with work
1. Due to stress at home, I am often preoccupied with family matters at work.
2. Because I am often stressed from family responsibilities, I have a hard time concentrating on my work.
3. Tension and anxiety from my family life often weakens my ability to do my job.
Behavior-based family interference with work
1. The behaviors that work for me at home do not seem to be effective at work.
2. Behavior that is effective and necessary for me at home would be counterproductive at work.
3. The problem-solving behavior that works for me at home does not seem to be as useful at work.

Job satisfaction (1 strongly disagree; 7 strongly agree; adapted from Heller and Watson 2005)
1. Right now, I feel fairly satisfied with my job.
2. At this very moment, I am enthusiastic about my work.
3. At this moment, I am finding real enjoyment in my work.
4. At present, each minute at work seems like it will never end. (Reverse coded)
5. Right now, I consider my job rather unpleasant. (Reverse coded)

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[1]The items were developed by following the procedures for scale development recommended in DeVellis (2003). First, an item pool was created based on Young's (2004) description of risk factors of Internet abuse. Second, after the item pool was created, the items were evaluated by doctoral students and senior scholars. Their feedback for addition, deletion, or modification helped to enhance the face and content validity. Finally, a pilot test was conducted with 30 parents in our sample. The pilot test showed that the scales had adequate convergent and discriminant validity.

Organizational commitment (1 strongly disagree; 7 strongly agree; adapted from Ahuja et al. 2007)
1. For me, this is the best of all possible organizations for which to work.
2. I am extremely glad to have chosen this organization to work for over other organizations.
3. This organization inspires the very best in the way of job performance.
4. I show by my actions that I really care about the fate of this organization.

Work Exhaustion (1 never; 7 daily; adapted from Ahuja et al. 2007)
1. I feel emotionally drained from my work.
2. I feel used up at the end of the work day.
3. I feel fatigued when I get up in the morning and have to face another day on the job.
4. I feel burned out from my work.

Anxiety (1 not at all; 7 very much; adapted from Marteau and Bekker 1992)
1. I am tense.
2. I feel upset.
3. I am worried.
4. I feel calm. (Reverse coded)
5. I am relaxed. (Reverse coded)
6. I feel content. (Reverse coded)

Depression (1 not true; 7 very true; adapted from Barber 2001)
1. I feel lonely.
2. I cry a lot.
3. I like to be alone.
4. I refuse to talk.
5. I think of killing myself.
6. I am secretive or keep things to myself.

Loneliness (1 strongly disagree; 7 strongly agree; adapted from Waaktaar and Torgersen 2012)
1. I feel in tune with people around me. (Reverse coded)
2. I can find companionship when I want it. (Reverse coded)
3. No one really knows me well.
4. People are around me but not with me.
5. I feel alone.

Peer relationships (1 strongly disagree; 7 strongly agree; adapted from Uruk and Demir 2003)
1. I am happy with the way things are between my friends and me.
2. It is important for me to have my friends' approval.
3. I share many of my secrets and private feelings with my friends.

Habit (1 strongly disagree; 7 strongly agree; adapted from Turel and Serenko 2012)
1. Using the Internet has become automatic to me.
2. Using the Internet is natural to me.
3. The use of the Internet has become a habit for me.

Social desirability bias (true/false; adapted from Turel, Serenko, and Bontis 2011)
Please indicate whether the statements below are true or false with respect to yourself:
1. It is sometimes hard for me to go on with my work if I am not encouraged. (F)
2. I sometimes feel resentful when I don't get my way. (F)
3. On a few occasions, I have given up doing something because I thought too little of my ability. (F)
4. There have been times when I felt like rebelling against people in authority even though I knew they were right. (F)
5. No matter who I'm talking to, I'm always a good listener. (T)
6. There have been occasions when I took advantage of someone. (F)
7. I'm always willing to admit it when I make a mistake. (T)
8. I sometimes try to get even, rather than forgive and forget. (F)
9. I am always courteous, even to people who are disagreeable. (T)

10   I have never been irked when people expressed ideas very different from my own. (T)
11.   There have been times when I was quite jealous of the good fortune of others. (F)
12.   I am sometimes irritated by people who ask favors of me. (F)
13.   I have never deliberately said something that hurt someone's feelings. (T)

Family hours (adapted from Ford et al. 2007)
The number of hours spent per week on family- and home-related duties such as housework and child care: _____.

Family time commitment (adapted from Frone et al. 1997)
The percentage of child-related tasks that they performed (0-100%)

Family involvement (1 strongly disagree; 7 strongly agree; adapted from Frone et al. 1992)
  1.   I am very much personally involved in my family.
  2.   Most of my interests center around my family.
  3.   The most important things that happen to me involve my family.
  4.   Most of my personal life goals are family-oriented.
  5.   I consider my family to be very central to my existence.

Family (marital) stressors (1 never; 7 almost always; adapted from Frone et al. 1992)
In your relationship, how often:
  1.   Can you depend on your husband/partner to be there when you really need him?
  2.   How much concern does he show for your feelings and problems?
  3.   How much tension is there between you and your husband/partner?
  4.   How often would you say you and your husband/partner have an unpleasant argument?

Family (parental) stressors (1 never; 7 almost always; adapted from Frone et al. 1992)
In your family life, how often:
  1.   Do you feel that you have too little time to spend by yourself because of your child(ren)?
  2.   Do you feel that your child(ren) is/are making too many demands on you?
  3.   Do/does your child(ren) disobey or do things you don't approve of?
  4.   Do/does your child(ren) do things that cause you problems or hassles?

Job involvement (1 strongly disagree; 7 strongly agree; adapted from Frone et al. 1992)
  1.   I am very much personally involved in my job.
  2.   Most of my interests center around my job.
  3.   The most important things that happen to me involve my present job.
  4.   Most of my personal life goals are job-oriented.
  5.   I consider my job to be very central to my existence.

Job insecurity (1 strongly disagree; 7 strongly agree; adapted from Frone 2008; Lim and Loo 2003)
  1.   I am not really sure how long my present job will last.
  2.   I can be sure of having my present job as long as I do good work. (Reverse coded)
  3.   I am afraid of losing my present job.
  4.   I can keep my current job for as long as I want it. (Reverse coded)
  5.   If I wanted to, I could easily find a comparable job elsewhere. (Reverse coded)

Work overload (1 strongly disagree; 7 strongly agree; adapted from Frone 2008; Frone et al. 1997)
  1.   I have too much work to do everything well.
  2.   My job requires that I work very fast.
  3.   My job requires that I work very hard.
  4.   I never seem to have enough time to get everything done on my job.

Work stress (1 never; 7 always; adapted from Frone et al. 1997)
How frequently do you feel each of the following emotional reactions when you think of your day-to-day experiences at work:
  1.   Fortunate (Reverse coded)
  2.   Relaxed (Reverse coded)

3. Pleased (Reverse coded)
3. Unhappy
5. Bothered
6. Frustrated

Fashion consciousness (marker variable) (1 strongly disagree; 7 strongly agree; adapted from Malhotra et al. 2006)
1. When I must choose between the two, I usually dress for fashion, not for comfort.
1. An important part of my life and activities is dressing smartly.
3. A person should try to dress in style.

References

Ahuja, M. K., Chudoba, K. M., Kacmar, C. J., McKnight, D. H., and George, J. F. 2007. "IT Road Warriors: Balancing Work–Family Conflict, Job Autonomy, and Work Overload to Mitigate Turnover Intentions," *MIS Quarterly* (31:3), pp. 1-17.

Armsden, G. C., and Greenberg, M. T. 1987. "The Inventory of Parent and Peer Attachment: Individual Differences and Their Relationship to Psychological Well-Being in Adolescence," *Journal of Youth and Adolescence* (16:5), pp. 427-454.

Barber, B. K. 2001. "Political Violence, Social Integration, and Youth Functioning: Palestinian Youth from the Intifada," *Journal of Community Psychology* (29:3), pp. 259-280.

Bumpus, M. F., and Werner, N. E. 2009. "Maternal Rule-Setting for Children's Internet Use," *Marriage & Family Review* (45:6-8), pp. 845-865.

Carlson, D. S., Kacmar, K. M., and Williams, L. J. 2000. "Construction and Initial Validation of a Multidimensional Measure of Work–Family Conflict," *Journal of Vocational Behavior* (56:2), pp. 249-276.

DeVellis, R. F. 2003. *Scale Development: Theory and Applications* (2nd ed.), Thousand Oaks, CA: SAGE Publications.

Ford, M. T., Heinen, B. A., and Langkamer, K. L. 2007. "Work and Family Satisfaction and Conflict: A Meta-Analysis of Cross-Domain Relations," *Journal of Applied Psychology* (92:1), pp. 57-80.

Frone, M. R. 2008. "Are Work Stressors Related to Employee Substance Use? The Importance of Temporal Context in Assessments of Alcohol and Illicit Drug Use," *Journal of Applied Psychology* (93:1), pp. 199-206.

Frone, M. R., Russell, M., and Cooper, M. L. 1992. "Antecedents and Outcomes of Work–Family Conflict: Testing a Model of the Work–Family Interface," *Journal of Applied Psychology* (77:1), pp. 65-78.

Frone, M. R., Yardley, J. K., and Markel, K. S. 1997. "Developing and Testing an Integrative Model of the Work–Family Interface," *Journal of Vocational Behavior* (50:2), pp. 145-167.

Heller, D., and Watson, D. 2005. "The Dynamic Spillover of Satisfaction between Work and Marriage: The Role of Time and Mood," *Journal of Applied Psychology* (90:6), pp. 1273-1279.

Lim, V. K. G., and Loo, G. L. 2003. "Effects of Parental Job Insecurity and Parenting Behaviors on Youth's Self-Efficacy and Work Attitudes," *Journal of Vocational Behavior* (63:1), pp. 86-98.

Malhotra, N. K., Kim, S. S., and Patil, A. 2006. "Common Method Variance in IS research: A Comparison of Alternative Approaches and a Reanalysis of Past Research," *Management Science* (52:12), pp. 1865-1883.

Marteau, T. M., and Bekker, H. 1992. "The Development of a Six item Short form of the State Scale of the Spielberger State—Trait Anxiety Inventory (STAI)," *British Journal of Clinical Psychology* (31:3), pp. 301-306.

Turel, O., and Serenko, A. 2012. "The Benefits and Dangers of Enjoyment with Social Networking Websites," *European Journal of Information Systems* (21:5), pp. 512-528.

Turel, O., Serenko, A., and Bontis, N. 2011. "Family and Work-Related Consequences of Addiction to Organizational Pervasive Technologies," *Information & Management* (48), pp. 88-95.

Turel, O., Serenko, A., and Giles, P. 2011. "Integrating Technology Addiction and Use: An Empirical Investigation of Online Auction Users," *MIS Quarterly* (35:4), pp. 1043-1061.

Uruk, A. C., and Demir, A. 2003. "The Role of Peers and Families in Predicting the Loneliness Level of Adolescents," *Journal of Psychology* (137:2), pp. 179-193.

Waaktaar, T., and Torgersen, S. 2012. "Genetic and Environmental Causes of Variation in Perceived Loneliness in Young People," *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics* (159:5), pp. 580-588.

Xu, Z., Turel, O., and Yuan, Y. 2012. "Online Game Addiction Among Adolescents: Motivation and Prevention Factors," *European Journal of Information Systems* (21:3), pp. 321-340.

Young, K. S. 2004. "Internet Addiction: A New Clinical Phenomenon and Its Consequences," *American Behavioral Scientist* (48:4), pp. 402-415.

Appendix B

Results of Confirmatory Factor Analysis (CFA) ▊

Table B1. CFA on All Variables Measured in the Child Survey						
	ADD	**ATT**	**ANX**	**DEP**	**LON**	**REL**	**HAB**
ADD1	0.79	0.51	0.51	0.33	0.44	0.43	0.37
ADD2	0.81	0.39	0.53	0.28	0.48	0.55	0.51
ADD3	0.83	0.50	0.50	0.38	0.26	0.54	0.38
ADD4	0.77	0.42	0.38	0.40	0.45	0.32	0.30
ADD5	0.75	0.50	0.49	0.57	0.31	0.45	0.33
ADD6	0.84	0.47	0.51	0.29	0.31	0.54	0.39
ADD7	0.83	0.57	0.42	0.53	0.42	0.43	0.31
ADD8	0.77	0.52	0.42	0.51	0.40	0.31	0.33
ADD9	0.75	0.52	0.44	0.56	0.31	0.45	0.44
ATT1	0.45	0.84	0.46	0.55	0.27	0.26	0.26
ATT2	0.30	0.74	0.36	0.44	0.56	0.33	0.38
ATT3	0.38	0.77	0.43	0.30	0.49	0.31	0.34
ATT4	0.46	0.84	0.30	0.35	0.38	0.45	0.53
ATT5	0.46	0.83	0.35	0.51	0.34	0.47	0.33
ATT6	0.43	0.81	0.27	0.47	0.54	0.48	0.54
ATT7	0.30	0.80	0.51	0.53	0.54	0.34	0.53
ATT8	0.45	0.83	0.52	0.47	0.31	0.31	0.54
ATT9	0.34	0.82	0.43	0.46	0.30	0.29	0.49
ATT10	0.26	0.77	0.35	0.30	0.49	0.31	0.56
ATT11	0.39	0.74	0.30	0.30	0.56	0.45	0.42
ATT12	0.49	0.81	0.36	0.56	0.50	0.28	0.30
ATT13	0.50	0.84	0.50	0.42	0.36	0.53	0.57
ATT14	0.34	0.80	0.40	0.35	0.38	0.29	0.40
ATT15	0.49	0.76	0.28	0.51	0.48	0.28	0.53
ATT16	0.37	0.79	0.57	0.26	0.51	0.36	0.34
ATT17	0.47	0.82	0.35	0.53	0.37	0.45	0.43
ATT18	0.48	0.79	0.54	0.38	0.47	0.37	0.26
ATT19	0.40	0.83	0.47	0.46	0.28	0.50	0.43
ATT20	0.26	0.81	0.41	0.43	0.51	0.39	0.41
ATT21	0.26	0.76	0.31	0.36	0.26	0.38	0.34
ATT22	0.46	0.81	0.27	0.36	0.37	0.32	0.54
ATT23	0.53	0.80	0.26	0.39	0.57	0.49	0.45
ATT24	0.28	0.77	0.40	0.27	0.47	0.54	0.34
ATT25	0.42	0.80	0.46	0.52	0.52	0.36	0.52
ATT26	0.51	0.80	0.38	0.55	0.27	0.54	0.54
ATT27	0.42	0.75	0.53	0.39	0.55	0.35	0.32
ATT28	0.28	0.80	0.52	0.33	0.30	0.35	0.32
ANX1	0.28	0.39	0.78	0.49	0.44	0.36	0.55
ANX2	0.34	0.32	0.77	0.47	0.48	0.37	0.32
ANX3	0.51	0.48	0.79	0.46	0.52	0.51	0.51

Table B1. CFA on All Variables Measured in the Child Survey (Continued)							
	ADD	**ATT**	**ANX**	**DEP**	**LON**	**REL**	**HAB**
ANX4	0.31	0.31	0.78	0.42	0.56	0.46	0.32
ANX5	0.55	0.54	0.81	0.56	0.52	0.41	0.34
ANX6	0.52	0.32	0.77	0.55	0.57	0.38	0.47
DEP1	0.37	0.38	0.39	0.77	0.49	0.31	0.48
DEP2	0.55	0.35	0.49	0.80	0.57	0.45	0.34
DEP3	0.43	0.50	0.34	0.84	0.50	0.44	0.49
DEP4	0.51	0.47	0.27	0.78	0.35	0.27	0.49
DEP5	0.41	0.41	0.56	0.75	0.38	0.50	0.49
DEP6	0.33	0.47	0.38	0.84	0.37	0.33	0.57
LON1	0.41	0.55	0.46	0.37	0.80	0.44	0.31
LON2	0.36	0.26	0.54	0.51	0.74	0.36	0.54
LON3	0.29	0.51	0.39	0.36	0.78	0.27	0.30
LON4	0.32	0.32	0.42	0.41	0.82	0.37	0.26
LON5	0.35	0.53	0.36	0.37	0.75	0.40	0.34
REL1	0.57	0.41	0.36	0.40	0.36	0.75	0.50
REL2	0.42	0.36	0.51	0.27	0.31	0.84	0.45
REL3	0.34	0.44	0.43	0.55	0.33	0.76	0.41
HAB1	0.37	0.43	0.43	0.38	0.44	0.47	0.79
HAB2	0.48	0.36	0.31	0.55	0.46	0.53	0.74
HAB3	0.31	0.28	0.55	0.34	0.50	0.40	0.75

ADD: Internet Addiction; ATT: Parent–child attachment; ANX: Anxiety; DEP: Depression; LON: Loneliness; REL: Peer Relationships; HAB: Habit

Table B2. CFA on Variables Predicting Internet Addiction Measured in the Parent Survey						
	ADD	**CON**	**MON**	**TIM**	**DIS**	**RAT**
ADD1	0.78	0.49	0.36	0.27	0.32	0.36
ADD2	0.80	0.28	0.49	0.43	0.48	0.45
ADD3	0.74	0.42	0.34	0.55	0.31	0.31
ADD4	0.76	0.31	0.45	0.46	0.47	0.35
ADD5	0.77	0.52	0.42	0.27	0.42	0.42
ADD6	0.74	0.40	0.32	0.39	0.35	0.29
ADD7	0.74	0.54	0.40	0.50	0.52	0.43
ADD8	0.73	0.31	0.57	0.47	0.47	0.57
ADD9	0.84	0.53	0.47	0.57	0.44	0.50
CON1	0.50	0.80	0.35	0.45	0.31	0.33
CON2	0.26	0.77	0.31	0.40	0.43	0.33
CON3	0.37	0.74	0.36	0.43	0.43	0.31
CON4	0.45	0.82	0.46	0.46	0.38	0.30
CON5	0.32	0.84	0.53	0.46	0.42	0.50
CON6	0.48	0.82	0.47	0.47	0.30	0.33
CON7	0.33	0.81	0.45	0.51	0.45	0.53
CON8	0.55	0.84	0.37	0.35	0.53	0.44
MON1	0.30	0.34	0.79	0.51	0.40	0.30
MON2	0.49	0.33	0.82	0.55	0.35	0.45
MON3	0.26	0.51	0.81	0.50	0.33	0.26
MON4	0.51	0.32	0.75	0.55	0.45	0.26
MON5	0.32	0.31	0.78	0.35	0.49	0.42
TIM1	0.45	0.29	0.51	0.81	0.41	0.57
TIM2	0.45	0.29	0.34	0.73	0.31	0.40
TIM3	0.47	0.30	0.56	0.75	0.41	0.57
DIS1	0.29	0.39	0.50	0.49	0.78	0.52
DIS2	0.30	0.41	0.40	0.41	0.81	0.38
DIS3	0.33	0.44	0.46	0.33	0.82	0.43
DIS4	0.31	0.54	0.35	0.43	0.78	0.53
RAT1	0.30	0.35	0.49	0.30	0.44	0.80
RAT2	0.51	0.49	0.31	0.50	0.54	0.84
RAT3	0.43	0.34	0.55	0.44	0.37	0.73
RAT4	0.50	0.29	0.49	0.41	0.30	0.75

ADD: Child's Internet Addiction Perceived by Parents; CON: Parental Control; MON: Monitoring; TIM: Unstructured Time; DIS: Dissuasion; RAT: Rationalization

Table B3. CFA on Variables Predicting Family-to-Work Conflict Measured in the Parent Survey						
	FWC	**WFC**	**FINV**	**MST**	**PST**	**ADD**
FWC1	0.81	0.28	0.32	0.30	0.47	0.51
FWC2	0.84	0.42	0.37	0.49	0.52	0.53
FWC3	0.73	0.36	0.40	0.51	0.26	0.44
FWC4	0.77	0.57	0.29	0.45	0.29	0.37
FWC5	0.80	0.53	0.33	0.49	0.39	0.38
FWC6	0.81	0.30	0.56	0.56	0.53	0.40
FWC7	0.74	0.52	0.40	0.44	0.33	0.56
FWC8	0.82	0.38	0.33	0.55	0.51	0.26
FWC9	0.84	0.50	0.34	0.52	0.46	0.48
WFC1	0.31	0.76	0.38	0.49	0.43	0.52
WFC2	0.36	0.84	0.31	0.54	0.37	0.43
WFC3	0.49	0.76	0.34	0.27	0.39	0.38
WFC4	0.51	0.82	0.57	0.51	0.37	0.46
WFC5	0.31	0.76	0.36	0.39	0.43	0.38
WFC6	0.46	0.76	0.26	0.44	0.49	0.40
WFC7	0.53	0.77	0.46	0.44	0.50	0.41
WFC8	0.45	0.76	0.55	0.48	0.35	0.42
WFC9	0.27	0.74	0.41	0.55	0.56	0.48
FINV1	0.46	0.40	0.80	0.27	0.46	0.51
FINV2	0.51	0.50	0.81	0.49	0.49	0.38
FINV3	0.27	0.45	0.83	0.46	0.56	0.46
FINV4	0.42	0.31	0.77	0.36	0.53	0.28
FINV5	0.57	0.51	0.75	0.33	0.35	0.52
MST1	0.31	0.43	0.55	0.81	0.41	0.33
MST2	0.55	0.57	0.32	0.76	0.27	0.50
MST3	0.48	0.35	0.56	0.73	0.28	0.36
MST4	0.53	0.38	0.49	0.80	0.54	0.47
PST1	0.50	0.47	0.28	0.55	0.80	0.43
PST2	0.56	0.45	0.30	0.45	0.78	0.53
PST3	0.31	0.43	0.47	0.49	0.82	0.34
PST4	0.34	0.29	0.57	0.50	0.78	0.27
ADD1	0.44	0.28	0.35	0.30	0.33	0.80
ADD2	0.37	0.49	0.32	0.44	0.53	0.83
ADD3	0.53	0.41	0.41	0.51	0.48	0.83
ADD4	0.50	0.38	0.45	0.33	0.53	0.78
ADD5	0.45	0.27	0.44	0.52	0.45	0.83
ADD6	0.28	0.37	0.57	0.52	0.43	0.77
ADD7	0.30	0.46	0.36	0.47	0.27	0.79
ADD8	0.39	0.43	0.27	0.53	0.38	0.74
ADD9	0.57	0.37	0.26	0.43	0.33	0.84

FWC: Family-to-Work Conflict; WFC: Work-to-Family Conflict; FINV: Family Involvement; MST: Family (Marital) Stress; PST: Family (Parental) Stress; ADD: Child's Internet Addiction Perceived by Parents

Table B4. CFA on Variables Predicting Job Outcomes Measured in the Parent Survey									
	SAT	**OCOM**	**EXH**	**JINV**	**INS**	**OVER**	**WST**	**FWC**	**ADD**
SAT1	0.84	0.53	0.28	0.46	0.46	0.50	0.40	0.55	0.44
SAT2	0.78	0.52	0.41	0.47	0.34	0.56	0.29	0.49	0.34
SAT3	0.79	0.39	0.40	0.45	0.29	0.27	0.27	0.26	0.29
SAT4	0.73	0.55	0.53	0.32	0.42	0.37	0.37	0.53	0.53
SAT5	0.80	0.57	0.47	0.28	0.55	0.44	0.54	0.31	0.57
OCOM1	0.33	0.78	0.48	0.53	0.47	0.32	0.31	0.37	0.47
OCOM2	0.33	0.73	0.31	0.35	0.50	0.26	0.48	0.50	0.50
OCOM3	0.31	0.75	0.28	0.46	0.29	0.30	0.40	0.50	0.55
OCOM4	0.37	0.78	0.38	0.48	0.46	0.57	0.40	0.41	0.31
EXH1	0.57	0.35	0.83	0.41	0.53	0.54	0.48	0.53	0.26
EXH2	0.37	0.57	0.75	0.46	0.53	0.55	0.35	0.38	0.26
EXH3	0.53	0.47	0.81	0.51	0.31	0.38	0.33	0.36	0.27
EXH4	0.27	0.40	0.76	0.41	0.57	0.35	0.33	0.54	0.57
JINV1	0.32	0.40	0.45	0.80	0.37	0.47	0.52	0.28	0.49
JINV2	0.47	0.55	0.38	0.79	0.43	0.54	0.48	0.44	0.30
JINV3	0.47	0.57	0.29	0.80	0.40	0.56	0.35	0.51	0.33
JINV4	0.32	0.30	0.41	0.83	0.41	0.51	0.27	0.47	0.49
JINV5	0.30	0.56	0.43	0.76	0.31	0.45	0.54	0.34	0.27
INS1	0.57	0.40	0.39	0.32	0.81	0.48	0.27	0.46	0.33
INS2	0.31	0.44	0.35	0.48	0.80	0.55	0.52	0.29	0.41
INS3	0.37	0.53	0.45	0.47	0.73	0.38	0.31	0.31	0.55
INS4	0.27	0.38	0.30	0.57	0.78	0.42	0.35	0.29	0.55
INS5	0.54	0.55	0.46	0.41	0.84	0.44	0.43	0.37	0.34
OVER1	0.49	0.46	0.43	0.40	0.31	0.81	0.39	0.40	0.28
OVER2	0.38	0.57	0.53	0.29	0.44	0.76	0.30	0.42	0.33
OVER3	0.38	0.54	0.45	0.50	0.48	0.83	0.43	0.53	0.32
OVER4	0.41	0.49	0.45	0.40	0.45	0.81	0.41	0.51	0.31
WST1	0.43	0.46	0.26	0.51	0.48	0.35	0.81	0.38	0.51
WST2	0.52	0.52	0.50	0.37	0.54	0.33	0.77	0.53	0.28
WST3	0.33	0.52	0.50	0.37	0.54	0.27	0.73	0.56	0.37
WST4	0.48	0.53	0.53	0.41	0.41	0.53	0.77	0.57	0.55
WST5	0.41	0.31	0.48	0.43	0.55	0.56	0.82	0.42	0.38
WST6	0.27	0.35	0.54	0.50	0.36	0.48	0.80	0.46	0.36
FWC1	0.54	0.34	0.26	0.45	0.55	0.33	0.27	0.83	0.30
FWC2	0.39	0.42	0.40	0.40	0.50	0.57	0.38	0.83	0.30
FWC3	0.52	0.46	0.56	0.54	0.39	0.27	0.46	0.83	0.44
FWC4	0.46	0.46	0.48	0.36	0.42	0.42	0.34	0.73	0.27
FWC5	0.37	0.30	0.47	0.51	0.26	0.26	0.50	0.73	0.32
FWC6	0.52	0.32	0.30	0.52	0.50	0.28	0.50	0.74	0.50
FWC7	0.43	0.28	0.57	0.56	0.53	0.56	0.29	0.74	0.44
FWC8	0.38	0.31	0.40	0.51	0.51	0.55	0.50	0.82	0.54
FWC9	0.36	0.36	0.37	0.29	0.28	0.46	0.26	0.74	0.36
ADD1	0.41	0.38	0.26	0.35	0.38	0.40	0.48	0.45	0.79
ADD2	0.26	0.47	0.27	0.44	0.28	0.41	0.27	0.35	0.79

Table B4.	CFA on Variables Predicting Job Outcomes Measured in the Parent Survey (Continued)								
	SAT	**OCOM**	**EXH**	**JINV**	**INS**	**OVER**	**WST**	**FWC**	**ADD**
ADD3	0.57	0.31	0.44	0.51	0.41	0.55	0.27	0.27	0.78
ADD4	0.52	0.41	0.53	0.39	0.53	0.28	0.52	0.42	0.78
ADD5	0.29	0.26	0.47	0.44	0.53	0.49	0.54	0.33	0.78
ADD6	0.33	0.27	0.27	0.35	0.30	0.54	0.39	0.38	0.82
ADD7	0.30	0.55	0.45	0.34	0.31	0.41	0.55	0.54	0.83
ADD8	0.44	0.36	0.48	0.29	0.39	0.39	0.56	0.46	0.75
ADD9	0.47	0.45	0.27	0.27	0.44	0.37	0.42	0.26	0.78

SAT: Job Satisfaction; OCOM: Organizational Commitment; EXH: Work Exhaustion; JINV: Job Involvement; INS: Job Insecurity; OVER: Work Overload; WST: Work Stress; FWC: Family-to-Work Conflict; ADD: Child's Internet Addiction Perceived by Parents

Appendix C

Results of Model Testing Based on Children's Self-Reported Internet Addiction ▮

Table C1. Predicting Internet Addiction	Internet Addiction (c)		
	Model 1	**Model 2**	**Model 3**
Block 1: Control Variables			
Gender of child (c) (1: female; 0: male)	-.12*	-.10	-.08
Gender of parent (p) (1: female; 0: male)	-.14*	-.12*	-.07
Age of child (c)	.12*	.08	.05
Age of parent (p)	.07	.05	.04
Marital status (p) (0: single)	-.16**	-.13*	-.11*
Household income (p)	.03	.02	.01
Anxiety (c)	.12*	.10	.08
Depression (c)	.14*	.12*	.11*
Loneliness (c)	.08	.05	.03
Peer relationships (c)	-.13*	-.12*	-.11*
Internet cost (p)	.05	.04	.02
Computer possession (p)	.06	.04	.01
Habit (c)	.08	.06	.04
Internet use (c)	.13*	.12*	.11*
Block 2: Parenting Behaviors and Parent–Child Attachment			
Parental control (PC) (p)		-.14*	-.03
Monitoring (M) (p)		-.13*	-.05
Unstructured time (UT) (p)		.13*	.10
Dissuasion (D) (p)		-.07	-.03
Rationalization (R) (p)		-.10	-.07
Parent–child attachment (PA) (c)		-.14*	-.12*
Block 3: Interactions			
PC × PA			-.23***
M × PA			-.25***
UT × PA			-.15**
D × PA			.08
R × PA			.10
R^2	.20	.26	.39
DR^2		.06**	.13***

**Notes:** (c) reported by child; (p) reported by parent. *$p < .05$; **$p < .01$; ***$p < .001$.

Table C2. Predicting Family-to-Work Conflict		
	Family-to-Work Conflict	
	Model 1	**Model 2**
Gender of parent (p)	.23***	.22***
Age of parent (p)	.19**	.17**
Marital status (p)	.14*	.14*
Household income (p)	.13*	.12*
Family hours (p)	-.08	-.08
Family time commitment (p)	-.14*	-.12*
Family involvement (p)	.14*	.15*
Family (marital) stressors (p)	.16**	.14*
Family (parental) stressors (p)	.10	.07
Work-to-family conflict (p)	.09	.05
Child's Internet addiction (c)		.26***
R²	.33	.40
DR²		.07**

Notea: (c) reported by child; (p) reported by parent. Family-to-work conflict was modeled as a second-order formative, first-order reflective construct. The patterns for predicting each first-order construct are not shown because they are identical. *p < .05; **p < .01; ***p < .001.

Table C3. Mediating Effect of Family-to-Work Conflict						
	Job Satisfaction		**Organizational Commitment**		**Work Exhaustion**	
	Model 1	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Control Variables						
Gender of parent (p)	.13*	.13*	.16**	.15*	-.16**	-.15*
Age of parent (p)	.13*	.12*	.12*	.12*	.15*	.14*
Marital status (p)	.07	.05	.04	.03	.13*	.13*
Household income (p)	.13*	.12*	.11*	.11*	.19**	.17**
Job involvement (p)	.23***	.20***	.19**	.16**	.08	.07
Job insecurity (p)	-.14*	-.13*	-.19**	-.16**	.21***	.20**
Work overload (p)	-.23***	-.21***	-.21***	-.20**	.22***	.21***
Work stress (p)	-.22***	-.21***	-.21***	-.19**	.37***	.34***
Child's Internet addiction (c)	-.24***	-.13*	-.13*	-.11*	.15*	.13*
Family-to-work conflict (p)		-.30***		-.15*		.25***
R²	.39	.49	.33	.37	.35	.46
DR²		.10**		.04*		.11***

Notes: (c) reported by child; (p) reported by parent. *p < .05; **p < .01; **p < .001.
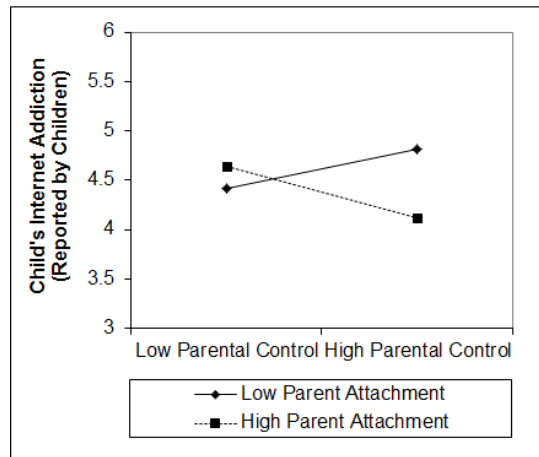
Figure C1. Parental Control × Parent–Child Attachment
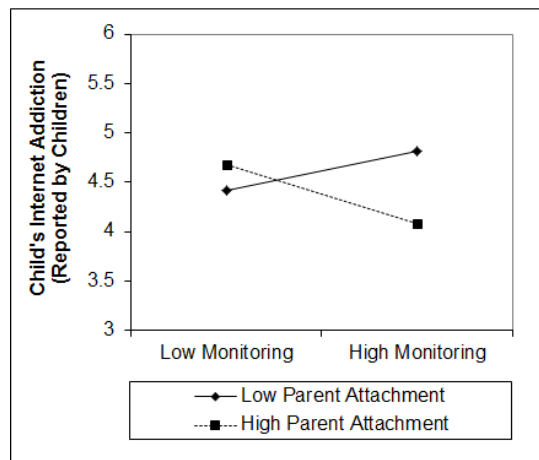
Figure C2. Monitoring × Parent–Child Attachment
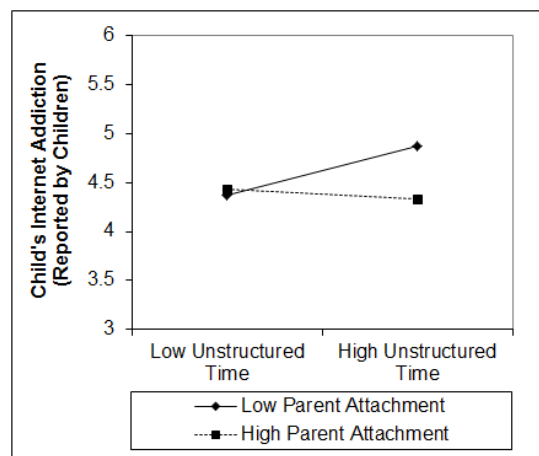
Figure C3. Unstructured Time × Parent–Child Attachment

Appendix D

Results of Heckman's Analysis ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

Our model posits that parenting behaviors affect children's Internet addiction that in turn affects parents' family-to-work conflict. There are potential reverse causations that children's Internet addiction may affect parenting behaviors (e.g., parents adjust their parenting behaviors in response to children's addiction) and that parents' family-to-work conflict may affect children's Internet addiction (e.g., children are negatively influenced by their parents' problems). In addressing such endogeneity, a few different approaches are available, such as instrumental variable regression (two-stage least squares) and/or Heckman's two-stage approach, which although developed originally to correct for selection bias has been used to correct for endogeneity (Heckman 1979; Venkatesh et al. 2017). Because we had used several control variables, there were no options remaining as suitable instrumental variables. Consequently, we reestimated the PLS model by dropping two variables that had served as control variables in the original estimation that could serve as instrumental variables—gender and age of parent—both of which can reasonably be expected to influence parenting behaviors and family-to-work conflict, but neither gender nor age of parent can be caused by Internet addiction or by family-to-work conflict. The results of the reestimated PLS models dropping these two possible instrumental variables are shown alongside the original PLS model results in Tables D1 and D2. With the pattern of results across these two models being similar, we decided in favor of using instrumental variables regression with Heckman's correction for the impact of this potential endogeneity.

We followed the procedures outlined in Venkatesh et al. (2017) to apply the two-stage Heckman's approach. The chosen instrumental variables were evaluated for relevance and exogeneity in stage 1. We computed the concomitant Inverse Mills Ratio (IMR) and added it to the model to account for the potential endogeneity with each regressor. In each case, each parenting behavior, the stage 1 model (not shown) was a probit estimation of the potential endogenous regressor (i.e., parenting behaviors in Table D1; work-to-family conflict in Table D2) that was used to compute the IMR. In the second stage model (shown in Tables D1 and D2). After controlling for the IMR, the coefficients of the independent variables and interactions remained largely consistent (see Tables D1 and D2). The results provide support for our proposed causal flow.

Table D1. Predicting Internet Addiction			Heckman's Analysis 2nd Stage Results (Endogenous Regressor Noted on Next Row)				
	Original PLS Results	Reestimated PLS Results	PC	M	UT	D	R
Control Variables							
Gender of child (c) (1: female; 0: male)	.02	.02	.02	.01	.01	.01	.01
Gender of parent (p) (1: female; 0: male)	-.13*						
Age of child (c)	.02	.02	.02	.01	.00	.01	.01
Age of parent (p)	.02						
Marital status (p) (0: single)	-.13*	-.14*	-.12*	-.10	-.07	-.04	-.11*
Household income (p)	-.05	-.05	-.04	-.04	-.02	-.03	-.02
Anxiety (c)	.02	.02	.01	.02	.01	.00	.00
Depression (c)	.04	.05	.03	.02	.03	.02	.03
Loneliness (c)	.04	.05	.03	.03	.01	.03	.02
Peer relationships (c)	.02	.04	.02	.01	.01	.01	.01
Internet cost (p)	.08	.10	.07	.05	.06	.06	.07
Computer possession (p)	.04	.03	.03	.02	.02	.02	.01
Habit (c)	.03	.04	.02	.01	.03	.02	.02
Internet use (c)	.05	.06	.04	.03	.03	.04	.03
Parenting Behaviors and Parent–Child Attachment							
Parental control (PC) (p)	-.07	-.09	-.05	-.03	-.05	-.04	-.05
Monitoring (M) (p)	-.08	-.10	-.06	-.05	-.04	-.06	-.05
Unstructured time (UT) (p)	.11*	.12*	.07	.10	.10	.07	.08
Dissuasion (D) (p)	-.07	-.08	-.05	-.04	-.03	-.03	-.04
Rationalization (R) (p)	-.15**	-.16*	-.12*	-.10	-.13*	-.13*	-.12*
Parent–child attachment (PA) (c)	-.13*	-.13*	-.11*	-.10	-.07	-.06	-.11*
Interactions							
PC × PA	-.16**	-.16**	-.14*	-.15*	-.14*	-.12*	-.13*
M × PA	-.29***	-.30***	-.26***	-.25***	-.26***	-.25**	-.26***
UT × PA	-.17**	-.19**	-.16**	-.14*	-.13*	-.14*	-.13*
D × PA	.05	.06	.04	.04	.02	.03	.03
R × PA	-.20**	-.21***	-.14*	-.17**	-.15*	-.16**	-.15*
Inverse Mills Ratio			.25***	.26***	.30***	.30***	.31***
R^2	.48	.48	.49	.49	.51	.52	.52

Notes: (c) reported by child; (p) reported by parent. *$p < .05$; **$p < .01$; ***$p < .001$.

Table D2. Predicting Family-to-Work Conflict			
	Original PLS Results	**Reestimated PLS Results**	**Heckman's Analysis 2nd Stage Results**
Gender of parent (p)	.21***		
Age of parent (p)	.14*		
Marital status (p)	.13*	.20**	.12*
Household income (p)	.12*	.18**	.13*
Family hours (p)	-.07	-.10	-.09
Family time commitment (p)	-.12*	-.14*	-.10
Family involvement (p)	.14*	.14*	.11*
Family (marital) stressors (p)	.13*	.15*	.11*
Family (parental) stressors (p)	.08	.09	.08
Work-to-family conflict (p)	.08	.10	.04
Child's Internet addiction (p)	.35***	.37***	.30***
Inverse Mills Ratio			.30***
R^2	.43	.40	.46

Notes: (p) reported by parent. *$p < .05$; **$p < .01$; ***$p < .001$.

References

Heckman, J. J. 1979. "Sample Selection Bias as a Specification Error," *Econometrica* (47:1), pp. 153-61.

Venkatesh, V., Shaw, J D., Sykes, T. A., Fosso Wamba, S., and Macharia, M. 2017. "Networks, Technology, and Entrepreneur-ship: A Field Quasi-Experiment among Women in Rural India," *Academy of Management Journal* (60:5), pp. 1709-1730.

Appendix E

Results of the Subgroup Analysis ▮▮▮▮▮▮▮▮

Table E1. Predicting Internet Addiction	Internet Addiction (c)	
	Full Sample (N = 776)	**Subsample (N = 139)**
Block 1: Control Variables		
Gender of child (c) (1: female; 0: male)	-.08	-.11*
Gender of parent (p) (1: female; 0: male)	-.07	-.05
Age of child (c)	.05	.08
Age of parent (p)	.04	.07
Marital status (p) (0: single)	-.11*	-.14*
Household income (p)	.01	.04
Anxiety (c)	.08	.07
Depression (c)	.11*	.13*
Loneliness (c)	.03	.03
Peer relationships (c)	-.11*	-.17**
Internet cost (p)	.02	.04
Computer possession (p)	.01	.08
Habit (c)	.04	.06
Internet use (c)	.11*	.07
Block 2: Parenting Behaviors and Parent–Child Attachment		
Parental control (PC) (p)	-.03	-.03
Monitoring (M) (p)	-.05	-.11*
Unstructured time (UT) (p)	.10	-.14*
Dissuasion (D) (p)	-.03	-.08
Rationalization (R) (p)	-.07	-.12*
Parent–child attachment (PA) (c)	-.12*	-.15*
Block 3: Interactions		
PC × PA	-.23***	-.26***
M × PA	-.25***	-.17**
UT × PA	-.15**	-.12*
D × PA	.08	.10
R × PA	.10	.04
R²	.39	.42

Notes: (c) reported by child; (p) reported by parent. *$p < .05$; **$p < .01$; ***$p < .001$.