The Effects of "Phubbing" on Social Interaction

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Do you ever feel like....

What is "Phubbing?"

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The act of snubbing someone in a social setting by concentrating on one's mobile phone.

Combination of the words "phone" and "snubbing."

Why does "Phubbing" Occur?

-"Phubbing" occurs largely because of smartphone addiction

-FOMO can also be a predictor of Phubbing

Overview of the Experiment

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-Participants viewed a three minute long video

-They were either phubbed a little, a medium amount, or a lot

-The effect on social interaction was recorded

-Researchers found that phubbing caused negative social interaction, but aren't sure why.
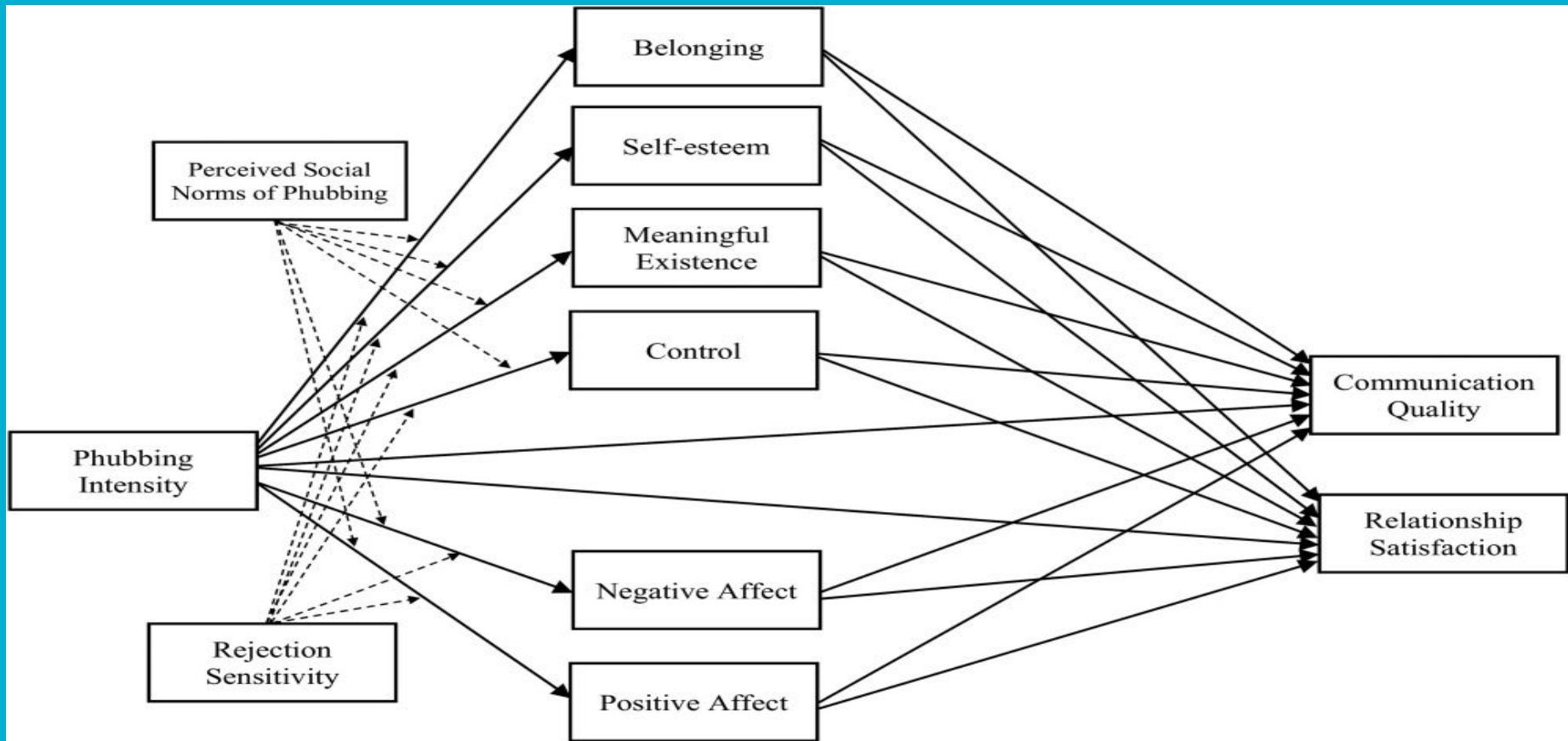
The effects of Phubbing on communication and relationships proposed by the article.

METHODS

Participants:

Initially, this study consisted of 153 undergraduate students made up of 19 men and 134 women from a British university, by participating in this experiment the students were offered course credit.

Participants were asked to answer attention check questions, out of those 153 initial participants, 25 participants failed to answer the question correctly, and were then excluded from participating.

Out of those 25 individuals, 6 of them were from the control group, 6 were from the partial phubbing group, and 13 were from the extensive phubbing group.

In total, this study consisted of 14 men and 114 women, which left a total of 128 participants; their ages ranged from 18 to 34 years of age.

The control group as well as the partial phubbing group had a total of 45 people and the extensive phubbing group had a total of 38.

METHODS

The ethnicity of the male participants varied from:
White/Caucasian (8)
Black British African (2)
Asian British Indian (1)
Other Asian background (2)
Other - Including mixed ethnicity (1)

The ethnicity of female participants varied from:
White/Caucasian (71)
Black British Caribbean (3)
Black British African (6)
Other black background (3)
Asian British Indian (3)
Asian British Pakistani (3)
Asian British Bangladeshi (1)
Chinese (2)
Other Asian Background (8)
Other - Including mixed ethnicity (14)

Through *Autodesk Maya software*, research for this study was conducted with 3D animation. This technique allowed them to design characters that were neutral in their gender and ethnicity, and create storyboards.

In addition to the animation, the participants were required to answer various types of questionnaires.

METHODS

Researchers were able to measure several things:

→ **Needs Satisfaction:** By use of the Need-Threat Measure (NTM), developed by Jamieson et al (2010), the extent to which the participants felt satisfaction or threat, in regards to the 4 fundamental needs following ostracism, on a 5-point scale.
Example: "I felt the conversation partner, interacted with me a lot."

→ **Positive & Negative Affect Schedule:** Using a 20-item measure (Watson, Clark, & Tellegen, 1988), and a 5-point scale, participants were asked to rate how well different feelings and emotions described them.
Example: "Distressed," "Excited," and "Upset."

→ **Quality of Communication:** a 10-item questionnaire asking participants to read 10 bi-polar descriptors, from the Iowa Communication Record, assessing the quality and impact of communication.
Example: "Formal - Informal" and "Smooth - Difficult."

METHODS

→ **Relationship Satisfaction:** In order to measure the participants' general satisfaction with the animated conversation, researchers used a 5-point scale and modified the Relationship Assessment Scale (RAS; Hendrick, 1988) and used a 5-point scale to measure the participants' responses.
Example: How satisfied were you with the conversation?

→ **Perceived Social Norms of Phubbing:** Using the Perceived Social Norms of Phubbing Scale (PSNP; Chotpitayasunondh & Douglas, 2016), participants were given 3 items that measured descriptive norms; based on their observations of others' behavior AND two items that measured injunctive norms; the inference of others' approval towards phubbing. *(Used as a moderator)*

→ **Rejection Sensitivity:** Through the Adult Rejection Sensitivity Questionnaire (A-RSQ), participants rated how well 18 statements accurately described them based off of a 6-point scale. *(Used as a moderator)*
Example: "How concerned or anxious would you be over whether or not your family would want to help you?"

PROCEDURE

→ Participants were placed in individual cubicles with their own computer, and completed an online questionnaire.

→ The study was a 3 group between-participants experimental design, consisting of no phubbing, partial phubbing, and extensive phubbing. They first answered the Adult Rejection Sensitivity Questionnaire.

Participants then watched a 3-minute silent animation of two people having a conversation. Each participant was assigned to one of three animation conditions:
1) The conversation partner who did not phub at all (control condition)
2) Someone who phubbed part of the time
3) Someone who phubbed majority of the time.

Dependent Measures: Perceived communication quality and relationship satisfaction.

Potential Mediators: Fundamental Needs Threat, Positive Affect, and Negative Affect.
Belonging, self-esteem, meaningful existence, and control.

Potential Moderators: Perceived Social Norms of Phubbing and Rejection Sensitivity.

Results

TABLE 2 Descriptive statistics and correlation coefficients among study variables (n = 128)

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Phubbing intensity	–	–	–												
2. Belonging (NTM)	2.87	1.20	−.74*	(.90)											
3. Self-esteem (NTM)	2.70	1.02	−.62*	.80*	(.90)										
4. Meaningful existence (NTM)	2.93	1.17	−.68*	.85*	.83*	(.91)									
5. Control (NTM)	2.11	.82	−.39*	.63*	.70*	.68*	(.77)								
6. PANAS negative	16.16	5.52	.44*	−.62*	−.60*	−.60*	−.45*	(.83)							
7. PANAS positive	18.77	8.03	−.53*	.61*	.70*	.68*	.65*	−.30*	(.92)						
8. ICR	5.47	1.34	.71*	−.84*	−.74*	−.78*	−.58*	.60*	−.55*	(.82)					
9. RAS	2.58	1.04	−.72*	.87*	.80*	.83*	.68*	−.54*	.73*	−.85*	(.94)				
10. A-RSQ	9.15	2.55	.06	−.03	−.17	−.10	−.16	.11	−.07	.06	−.11	(.62)			
11. PSNP	16.12	2.63	−.14	.07	.08	.03	−.02	.04	.12	−.04	.06	−.09	(.44)		
12. Phubbing intensity* A-RSQ	.13	5.32	−.03	−.01	−.15	−.07	−.11	.11	−.07	.06	−.08	.92*	− .09	–	
13. Phubbing intensity* PSNP	−.24	5.36	−.11	.08	.11	.03	.00	.04	.12	−.06	.08	−.09	.92*	−.12	–

All statistical tests were performed using SPSS Statistics version 24.0.

Results

Correlation analyses:

-     Spearman's rank-order correlations were used to assess the nonparametric relationship between phubbing intensity and dependent variables.

-     Pearson product-moment correlations were used to assess the relationship among other variables.

-     The intensity of being phubbed negatively correlated with RAS, positive affect, and all NTM subscales. The intensity of being phubbed positively correlated with ICR and negative affect. The proposed moderators did not correlate with the dependent variable nor the potential mediators.

Results

Effect of moderators:

There were no moderating effects of rejection sensitivity and perceived social norms of phubbing on the relationship between phubbing intensity and fundamental needs, negative affect, and positive affect.

-- The moderators were eliminated from the path model because they showed no effects.

Results

Effect of phubbing on communication outcomes:

-        To determine the effects of being phubbed on the combined dependent variables, a one-way multivariate analysis of variance was conducted.

-        The difference between the conditions on the combined dependent variables was significant. ICR scores and RAS scores were significantly different across the different phubbing conditions.

-        Specifically, participants in the control group showed lower ICR and higher RAS mean scores than participants in the partial phubbing and extensive phubbing groups. Cohen's d values ranging between 1.09 - 2.69

Results

Effects of phubbing on fundamental needs as mediators: Figure 5 shows the difference between how different levels of phubbing, no phubbing to extreme phubbing affected how a person being phubbed may feel. An increase in phubbing lead to a decrease in the feeling of belonging and control, self-esteem, and meaningful existence.
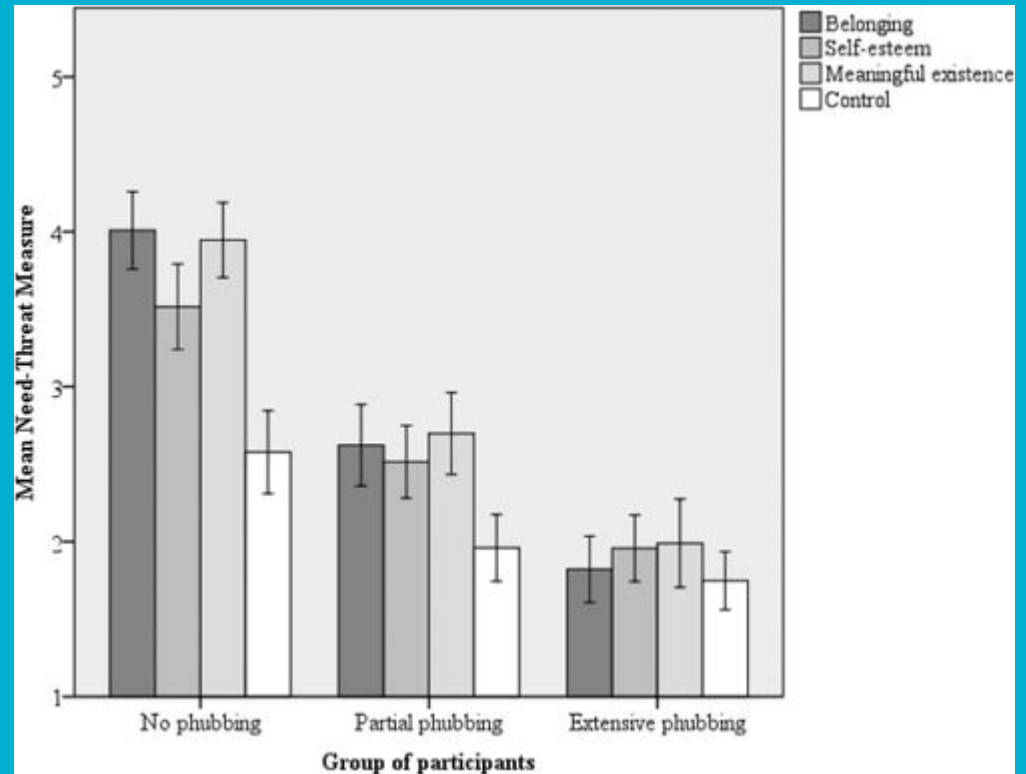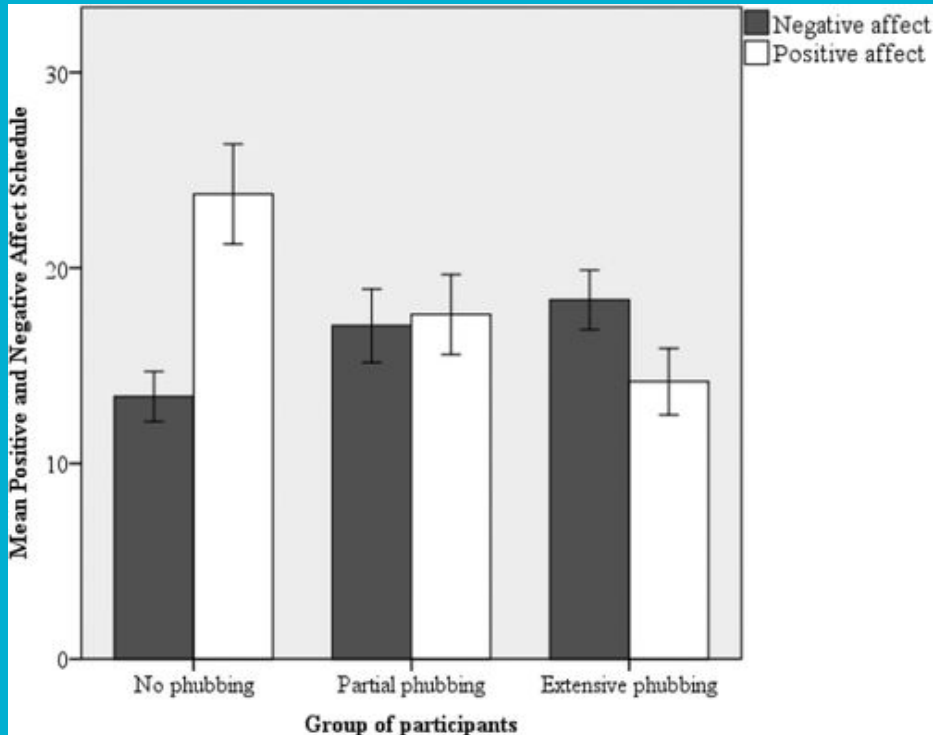
Need-Threat Measure

TABLE 3 Means and standard deviations of measures by groups of participants

Measures	No phubbing (n = 45)		Partial phubbing (n = 45)		Extensive phubbing (n = 38)	
	M	SD	M	SD	M	SD
Iowa communication record	4.26	1.07	5.71	.90	6.62	.82
Relationship assessment scale	3.52	.85	2.40	.76	1.68	.47
Need-threat measure						
Belonging	4.01	.83	2.62	.88	1.82	.65
Self-esteem	3.52	.92	2.52	.78	1.96	.65
Meaningful existence	3.95	.80	2.70	.88	1.99	.87
Control	2.58	.89	1.96	.72	1.75	.57
Positive and negative affect schedule						
Negative	13.42	4.27	17.04	6.25	18.37	4.63
Positive	23.78	8.51	17.62	6.81	14.18	5.17

Results

Effect on phubbing on positive and negative affect as mediators: This table shows the mean difference of the positive and negative effects between the different levels of phubbing. As it was predicted by the researchers, no phubbing resulted in a more positive affect than negative and extensive phubbing resulted in a higher negative affect than the other phubbing conditions.

Results

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Need-threat measure						
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Self-esteem	3.52	.92	2.52	.78	1.96	.65
Meaningful existence	3.95	.80	2.70	.88	1.99	.87
Control	2.58	.89	1.96	.72	1.75	.57
Positive and negative affect schedule						
Negative	13.42	4.27	17.04	6.25	18.37	4.63
Positive	23.78	8.51	17.62	6.81	14.18	5.17

This shows the significant mean differences between different phubbing conditions.

Results

The Games-Howell post hoc tests were used to further research and determine where the differences were between the different phubbing conditions.

The only non-significant difference that was shown from the post hoc test was between the partial and extensive phubbing groups.

TABLE 6 Post hoc tests of PANAS negative and positive

Dependent variable	Post hoc test	(I) Phubbing condition	(J) Phubbing condition	Mean diff (I-J)	SE	Sig.	95% CI Upper	95% CI Lower	Cohen's d
PANAS negative	Games-Howell	No phubbing	Partial phubbing	−3.62	1.13	.01	−6.32	−.93	.68
			Extensive phubbing	−4.95	.99	<.001	−7.30	−2.59	1.11
		Partial phubbing	No phubbing	3.62	1.13	.01	.93	6.32	.68
			Extensive phubbing	−1.32	1.20	<.001	−4.18	1.53	.24
		Extensive phubbing	No phubbing	4.95	.99	.51	2.59	7.30	1.11
			Partial phubbing	1.32	1.20	.51	−1.53	4.18	.24
PANAS positive	Games-Howell	No phubbing	Partial phubbing	6.16	1.62	.00	2.28	10.03	.80
			Extensive phubbing	9.59	1.52	<.001	5.96	13.23	1.36
		Partial phubbing	No phubbing	−6.16	1.62	.01	−10.03	−2.28	.80
			Extensive phubbing	3.44	1.32	.03	.30	6.58	.60
		Extensive phubbing	No phubbing	−9.59	1.52	<.001	−13.23	−5.96	1.36
			Partial phubbing	−3.44	1.32	.03	−6.58	−.30	.60

The other results showed significant differences between the groups.

Path Analysis

This model accounts for 47% variance in communication quality and 18% variance in relationship satisfaction
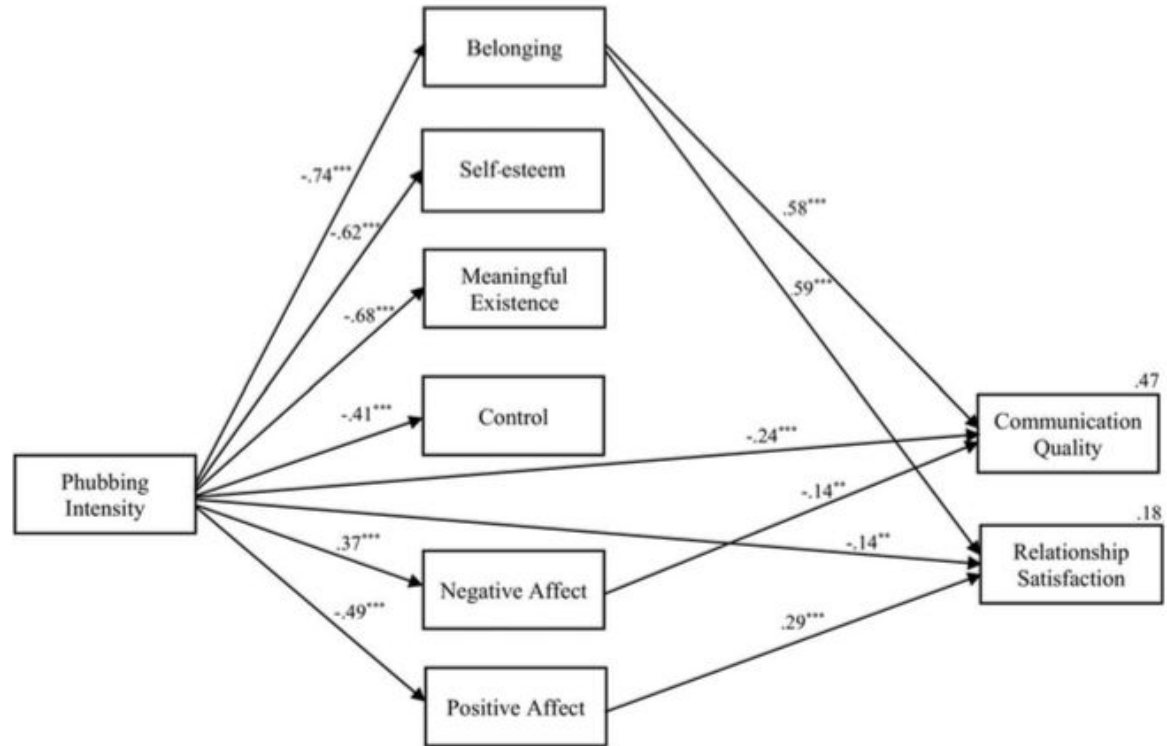

FIGURE 7   Path analysis of the final model

This research is still new, and researchers still have a lot to learn about "Phubbing!"

Discussion

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- This research is an early attempt to understand the consequences of phubbing.
- Researchers findings revealed that the experience of phubbing in a controlled conversation had a negative impact on perceived communication quality and relationship satisfaction.
- This was thought to be predicted because phubbing lowers mood and threatens the 4 fundamental needs.

But why would studying phubbing be important?

Discussion

Strengths:
-uses animation
-animation can be adapted to study varying degrees of phubbing

Limitations:
-uses animations
-small sample size that was not very diverse
-the study only varied the extent to which participants were phubbed; not the number of times they were phubbed

Discussion

Future research:

- Future research should further understand people's coping and longer term responses to phubbing. (Temporal need- threat model)
- Examine additional mechanisms to explain the effects of phubbing on relationship outcomes
- Examine phubbing effects in different relationship context
- Consider more naturalistic communication settings to increase external validity