Vita Fistravec, Michael Groth, Christoph Kirsten, Rebecca Schretzmayer

Effects of private smartphone communication at work on work-home-interaction and well-being

universität wien

Introduction

The number of smartphone users worldwide today surpasses three billion and is forecast to further grow by several hundred million in the next few years (Statista, 2019). The widespread usage doesn't seem to be slowing down any bit. It therefore comes to no surprise that the smartphone has invaded all aspects of life. In a technically enhanced world, where people are expected to be available at all times, the boundaries between being present at work and at home are blurry (Brooks & Califf, 2017; Kreiner, 2006; Yang, Zhang, Shen, Liu, & Zhang, 2019). Therefore, daily private smartphones communication at work leads a work–home interference, which is a process of negative interaction between the work and home domain (Van Hooff, Geurts, Kompier, & Taris, 2006). Research has shown that daily private smartphone communication at work has its benefits, like increasing social capital (Ellison, Gray, Lampe & Fiori, 2014), and its costs, like decreasing work engagement (Syrek, Kühnel, Vahle-Hinz, & De Bloom, 2018). However, do empirical results change when private smartphone communication is perceived as affective benefit (e.g., being able to stay in touch with others) or affective costs (e.g., having to meet expectations of others to communicate) at work? Furthermore, for *whom* is the private use of their smartphone at work associated with more benefits and costs?

Sample

N = 92 | ♀= 54%

Age: M = 34.7, SD = 11.7 (range: 22 - 60 years)

Children in household: 21% ≥ 1 children

Relationship status: 73% in a relationship

Inclusion criteria: person works > 20 hours/week | Smartphone is used for private purposes during working hours

Data Collection: 14th October – 15th November, 2019 | Online questionnaire in German three times a day (12 p.m., 5 p.m. and 9 p.m.)

Method: Mediation and Moderation analysis via PROCESS Macro v3.4 (Hayes, 2019)

Instruments

Dimension	Scale	Items	α	Examples*	Source
Predictor	(Daily) Private Smartphone Use	6	/	Wie lange haben Sie heute Vormittag (Nachmittag) welche Applikation(en) zur privaten Kommunikation mit Anderen (z.B. mit Partner/in, Familienangehörige, Freunde) genutzt?	self-developed
Mediators	Communication Benefit	4	.82/.83**	Während meiner Arbeit heute Vormittag (Nachmittag) hielten mich die privaten Kontakte über wichtige Ereignisse im Leben der anderen auf dem Laufenden.	Ijsselsteijn et al. (2009; ABC-Questionnaire)
	Communication Cost	3	.61/.75**	Während meiner Arbeit heute Vormittag (Nachmittag) war die/der Andere enttäuscht, wenn sie/ihn für längere Zeit nicht kontaktierte.	
Outcomes	Work-Home-Interaction (positive)	3	.72	Heute konnte ich in der Arbeit private Verpflichtungen/Pflichten erfüllen.	Kühnel et al. (2017)
	Home-Work-Interaction (negative)	3	.76	Heute hatte ich Schwierigkeiten, mich auf die Arbeit zu konzentrieren, weil ich mich mit privaten Angelegenheiten beschäftigte.	Geurts et al. (2005; SWING)
	Positive Affect	5	.88	Wie fühlen Sie sich im Moment? (z.B. entspannt, locker, ruhig, …)	Abele & Brehm (1986; BFS)
	Negative Affect	5	.88	Wie fühlen Sie sich im Moment? (z.B. energielos, lahm, passiv, …)	Abele & Brehm, (1986; BFS)
Moderator	Boundary Strength at Work	8	.87	Ich lasse mein Privatleben außerhalb des Arbeitsplatzes.	Hecht & Allen (2009)

*Items in German language as used in the questionnaire ** Alpha (Between-level)

Hypotheses and Models (Within-Level)

Work-Home-Interaction / Home-Work-Interaction

✓ H1a: Daily use of private smartphone communication at work leads to higher work-home-interaction.
✓ H2a: When daily private smartphone communication at work is perceived as a benefit, work-home-interaction is perceived positive.
✗ H3a: When daily private smartphone communication at work is perceived as a cost, work-home-interaction is perceived negative.
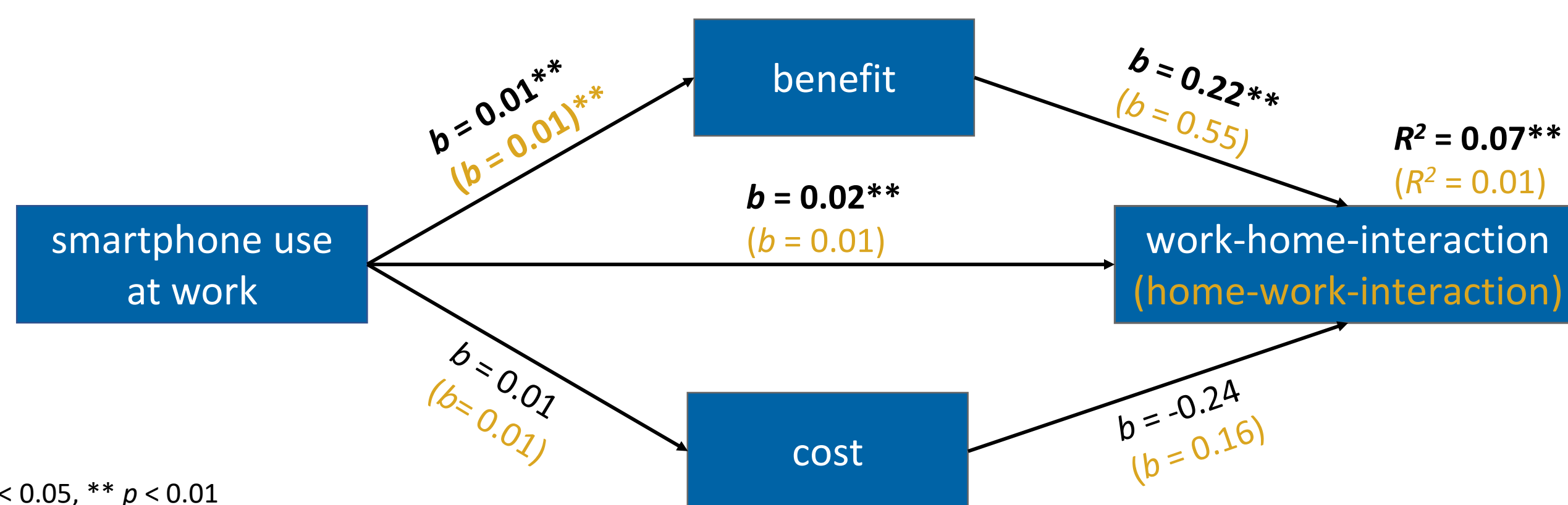
* p < 0.05, ** p < 0.01

Indirect effect WHI: Benefit b = 0.003, 95% CI [0.001, 0.006]; Cost b = -0.000, 95% CI [-0.001, 0.001] I Total: b = 0.003, 95% CI [0.001, 0.005]
Indirect effect HWI: Benefit b = 0.001, 95% CI [-0.001, 0.002]; Cost b = -0.001, 95% CI [-0.000, 0.003] I Total: b = 0.001, 95% CI [-0.000, 0.005]

Well-being

✗ H1b: Daily use of private smartphone communication at work leads to a higher negative affect.
✗ H2b: When daily private smartphone communication at work is perceived as a benefit, negative affect is lower.
✗ H3b: When daily private smartphone communication at work is perceived as a cost, negative affect is higher.
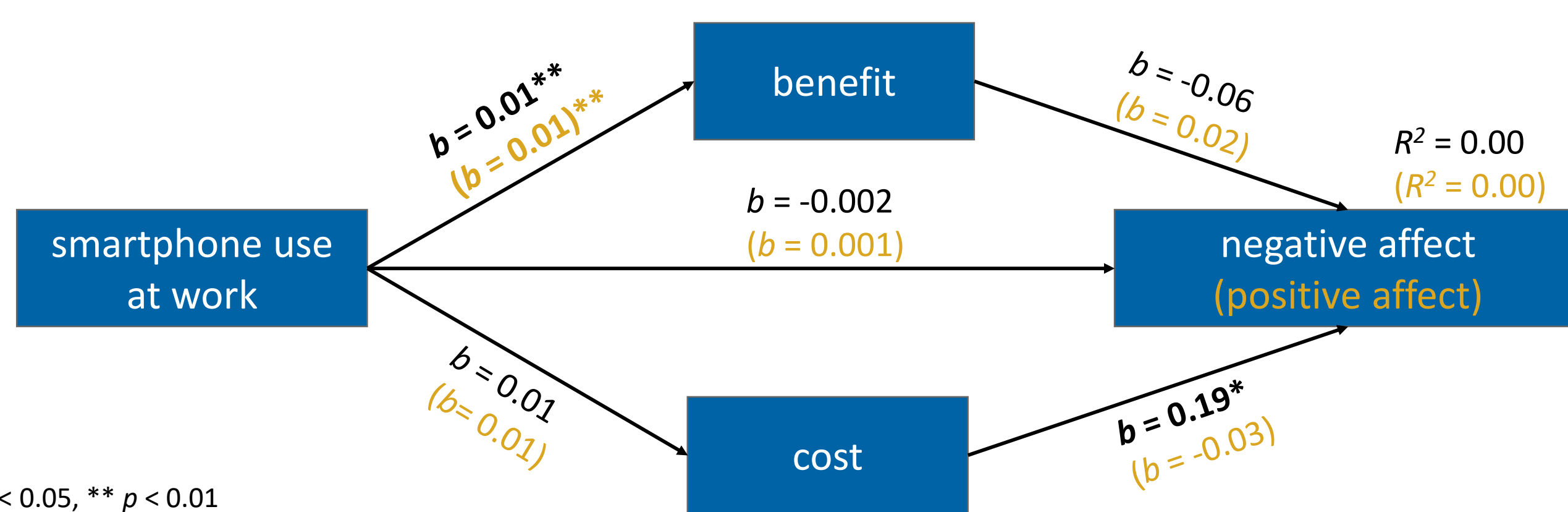
* p < 0.05, ** p < 0.01

Indirect effect Negative Affect: Benefit b = -0.001, 95% CI [-0.003, 0.001]; Cost b = -0.001, 95% CI [0.000, 0.004] I Total: b = 0.001, 95% CI [-0.001, 0.003]
Indirect effect Positive Affect: Benefit b = 0.000, 95% CI [-0.001, 0.002]; Cost b = -0.000, 95% CI [-0.002, 0.001] I Total: b = 0.001, 95% CI [-0.002, 0.002]

Further Analyses (Between-Level)

Moderation analysis showed a significant interaction effect, b = .01, 95% CI [0.01, 0.02], t = 5.15, p = .00, indicating that the relationship between average communication time and communication benefit was moderated by work-nonwork boundary strength.
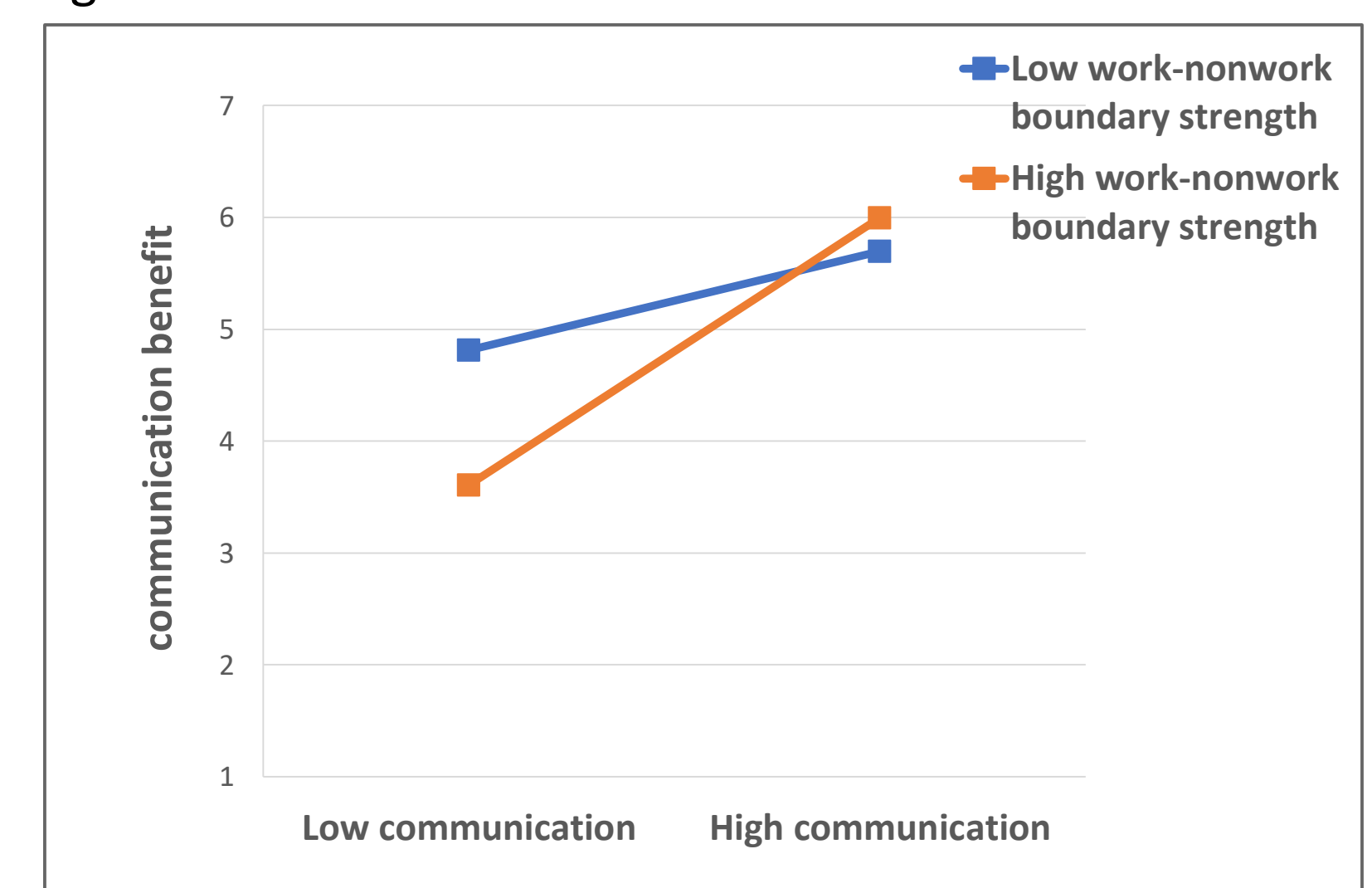

Figure 1. Simple slopes equations of the regression of daily communication benefit on daily communication in minutes at three levels of work-nonwork boundary strength.

A second moderation analysis also showed a significant interaction effect, b = .01, 95% CI [0.01, 0.02], t = 3.48, p = .00, indicating that the relationship between average communication time and communication cost was likewise moderated by work-nonwork boundary strength.
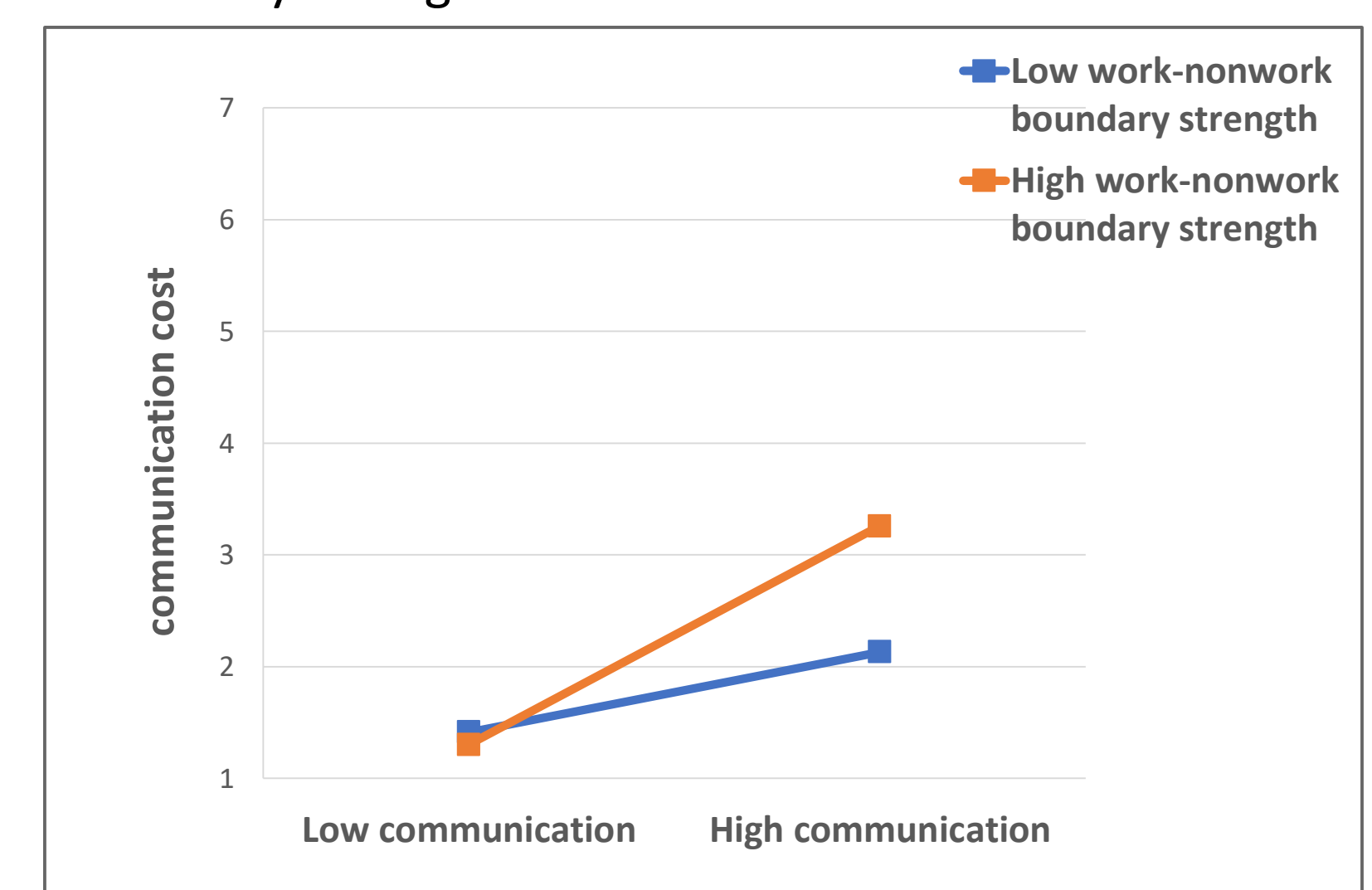

Figure 2. Simple slopes equations of the regression of daily communication cost on daily communication in minutes at three levels of work-nonwork boundary strength.

Discussion

This study was able to show that private smartphone use at work had a significant effect on positive work-home-interaction but not on negative home-work-interaction. The effect on positive work-home interaction was partially mediated by perceived communication benefits. Results also have shown that smartphone use at work was seen as benefit, but not as cost, so the possibility to stay in touch with others while being at the workplace was perceived positive.
Contrary to our expectations we could not find any support for our hypotheses that private smartphone use at work has a beneficial or adverse effect on ones well-being. It is important to note that these results do not say anything about whether smartphone use is bad or good per se, but that it is always the affective evaluation of the interaction that matters.
Further moderation analyses have shown that, when having a high smartphone use, employees with a higher boundary strength at work evaluated their communication significantly more beneficial than employees with a lower boundary strength. This suggests that even people who prefer to keep their work and private life separated can also draw benefit out of smartphone use at work.

Implications

Research:
❖ More research is needed to examine possible benefits of smartphone use at work and its impact on positive work-home-interaction.
❖ Further research on other effects of private smartphone use at work e.g. on information overload, work engagement and job performance is needed.

Organizations:
❖ Our results speak against a strict prohibition of smartphone use at the workplace because smartphone use can help employees to have a positive work-home-interaction and is perceived as social benefit, not social cost.
❖ Nowadays having the preference to keep private life and work completely separated can be problematic because in case of occurring private communication at work it leads to an increase in perceived social cost.

References

Brooks, S., & Califf, C. (2017). Social-media induced technostress: its impact on the job performance of IT professionals Stand the moderating role of job characteristics. *Computer Networks, 114*, 143-154. doi:10.1016/j.comnet.2016.08.020; Ellison, N. B., Gray, R., Lampe, C., & Fiori, A. T. (2014). Social capital and resource requests on Facebook. *New Media & Society, 16*, 1104-1121. http://doi.org/10.1177/1461444814543998; Kreiner, G. E. (2006). Consequences of work-home segmentation or integration: a person-environment fit perspective. *Journal of Organizatonal Behavaior, 27*, 485–507. doi: 10.1002/job.386; Statista (2019). Number of smartphone users worldwide from 2016 to 2021 (in billions). https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/; Syrek, C.J., Kühnel, J., Vahle-Hinz, T., & De Bloom, J. (2018). Share, like, twitter, and connect: Ecological momentary assessment to examine the relationship between non- work social media use at work and work engagement. *Work & Stress, 32*, 209-227. doi:10.1080/02678373.2017.1367736; Van Hooff, M. L. M., Geurts, S. A. E., Kompier, M. A. J., & Taris, T. W. (2006). Work–home interference: How does it manifest itself from day to day? Work & Stress, 20, 145– 162. doi:10.1080/02678370600915940