

Adolescents' interactions with people from the internet and the quality of their offline friendships

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Introduction: Aims

Project FUTURE

Adolescents' ICT usage \leftrightarrow well-being

This study

Social ICT usage \leftrightarrow social well-being

Social interactions with people met online \leftrightarrow Quality of offline friendships

Interactions with people met online:

- Online communication
- Face-to-face meetings (offline)

Introduction: Theory & hypotheses

Displacement hypothesis (Kraut et al., 1998; Nie, 2001)

- New online relationships → less time for existing offline relationships → lower offline friendship quality

H1: Interactions with people met online decrease offline friendship quality

Stimulation hypothesis (Bryant et al., 2006; Valkenburg & Peter, 2007)

- Most online communication with existing friends → helps maintain and deepen offline friendships

What about people met on the internet?

- Adolescents' often talk to new people online, about a half meets them offline (Smahel et al., 2020)
- Meetings often to make new friends, mostly repeated (Mýlek et al., 2023)
- Online contacts → new offline friendships that contribute to overall offline friendship quality

H2: Online communication with people met online leads to more face-to-face meetings with them

H3: Online communication with people met online, through face-to-face meetings, increases offline friendship quality

Methods: Design & sample

Longitudinal online survey

- 4 waves, 6-month intervals
- Czech adolescents, age range 11-16 (T1) + one parent/carer (not used here)

Quota sampling

- **Households:** SES (parent's education)
NUTS3 region
municipality population
- **Adolescents:** balanced age groups
balanced gender in age groups
- Sampling and data collection conducted by external research agency (STEM/MARK)

	Data collection	<i>N</i>	male	Age <i>M(SD)</i>
T1	May/June 2021	3,087	50.1%	13.5 (1.74)
T2	Nov/Dec 2021	1,995	49.8%	13.7 (1.77)
T3	May/June 2022	1,602	50.1%	14.0 (1.71)
T4	Nov/Dec 2021	1,060	50.8%	14.3 (1.69)

Methods: Measures I

Introduction: *„On the internet, people can have conversations with other people whom they do not know from real life - they have not met in person. These conversations can happen on various places, e.g., on social networks, in games, on dating sites, in internet discussion, etc. We are not talking about "professional" communication (e.g., with e-shop, tutor, helpline).“*

Online communication

- 1 item, 7-point frequency scale (1 = never, 7 = several times a day)
- *„In the past 6 months, how often have you been talking to someone unknown on the internet?“*

Face-to-face meetings

- 1 item, 5-point scale (0 = none, 4 = four or more)
- *„How many such meetings have you experienced in about past 6 months? Here we do not mean repeated meetings with the same person, but only those meetings where you met someone new.“*

Methods: Measures II

Friendship quality

- Based on *Network of Relationships Inventory – Social Provision Version* (Furman & Buhrmester, 1985)
- **Peer support:** 5 items, e.g.: „How much do they appreciate and respect you?“
- **Peer conflict:** 3 items, e.g.: „How often do you get mad with each other?“
- 4-point Likert scale (1 = not at all, 4 = really a lot)
- CFA – support & conflict almost uncorrelated ($r = -.03$) → we treat them separately

Peer support

- $M_{T1} = 2.77$, $SD_{T1} = 0.58$ (consistent in time)
- $\omega = .77 - .79$
- Metric longitudinal invariance
- Metric model fit:
 $\chi^2 = 298.22$, $df = 134$, $p < .001$
CFI = .99, TLI = .98, RMSEA = .03, SRMR = .03

Peer conflict

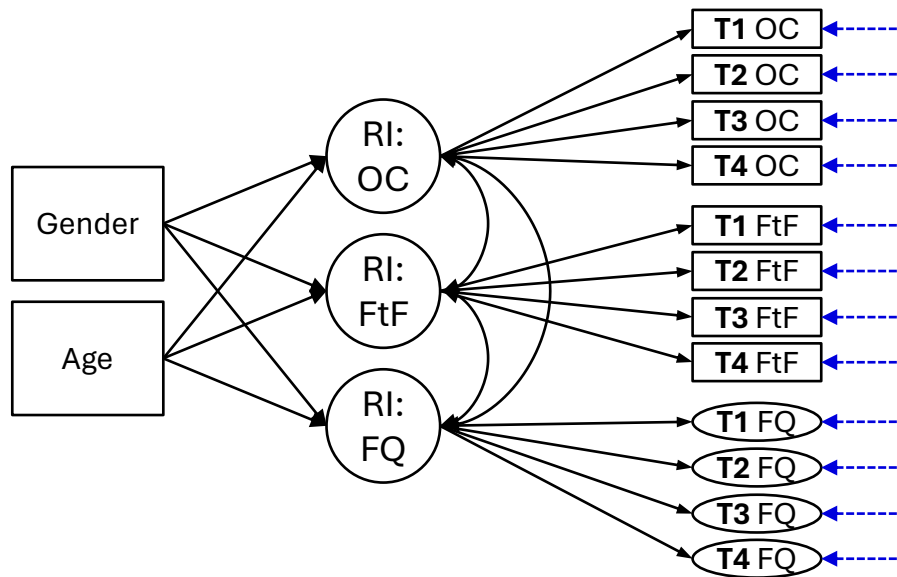
- $M_{T1} = 1.90$, $SD_{T1} = 0.51$ (consistent in time)
- $\omega = .72 - .82$
- Scalar longitudinal invariance
- Scalar model fit:
 $\chi^2 = 54.37$, $df = 42$, $p = .096$
CFI = 1.00, TLI = 1.00, RMSEA = .01, SRMR = .02

Methods: Analysis

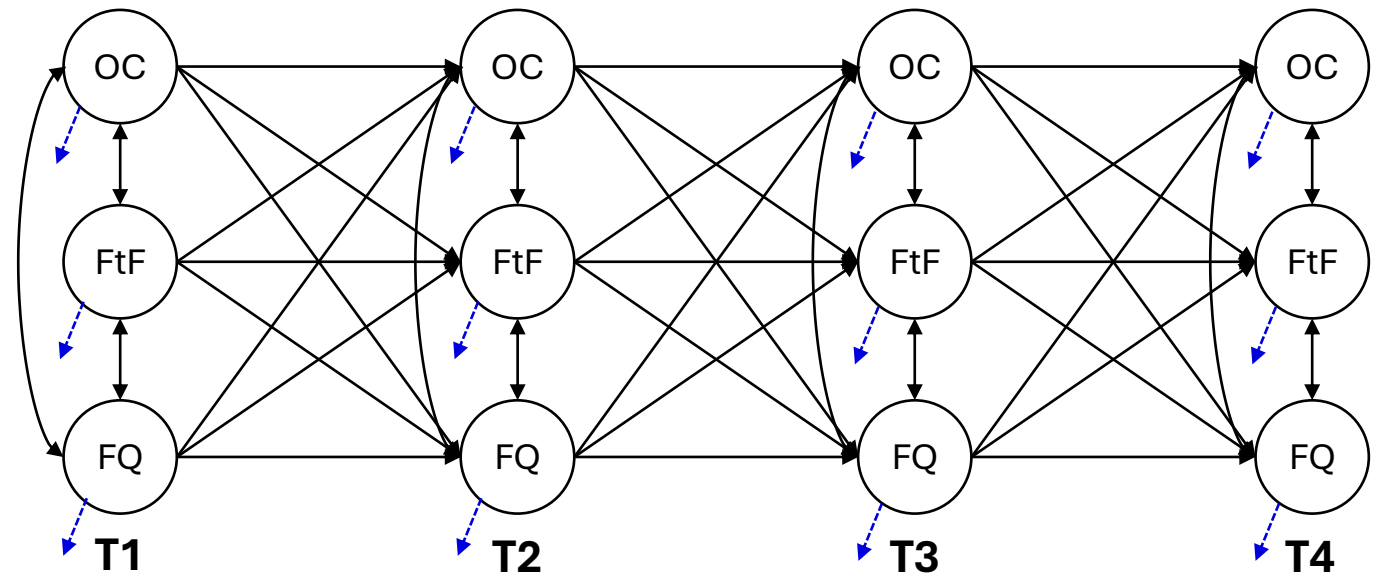
Random intercept cross-lagged panel model (RI-CLPM)

- Differentiates stable **between-person relationships** and **within-person dynamics**
- **Our model:** latent peer support/conflict, ordinal online communication/FtF meetings, WLSMV estimator

Between-person part



Within-person part



* dashed blue arrows indicate where the within- and between-person parts of the model connect (not residuals)

Results: Peer support, between-person

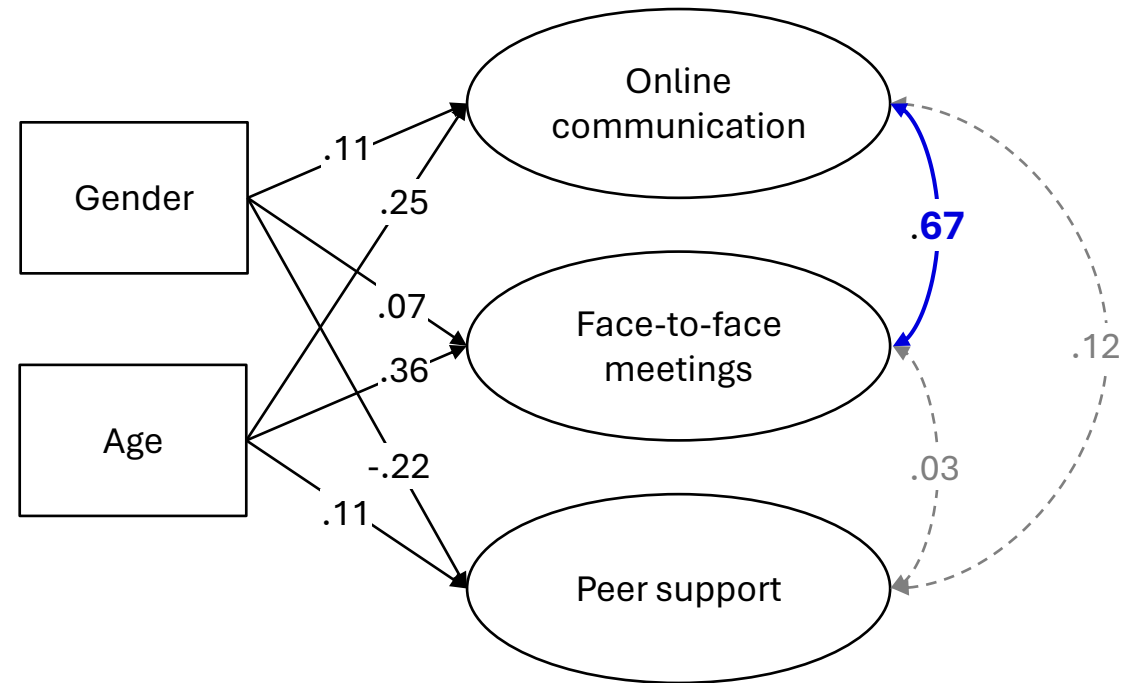
Overall model fit:

$\chi^2 = 1539.00$, $df = 375$, $p < .001$

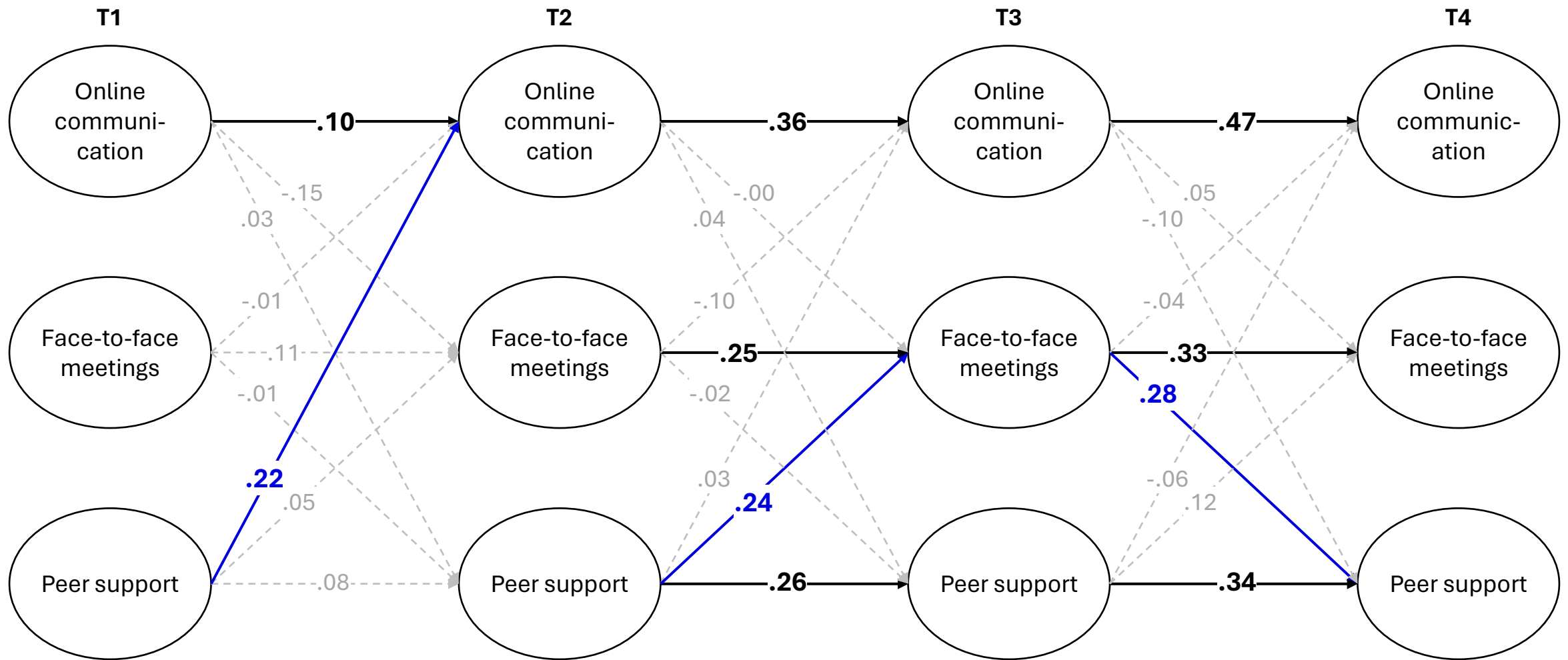
CFI = .91, TLI = .90

RMSEA = .03, 90% CI [.03; .03]

SRMR = .08



Results: Peer support, within-person



Results: Peer conflict, between-person

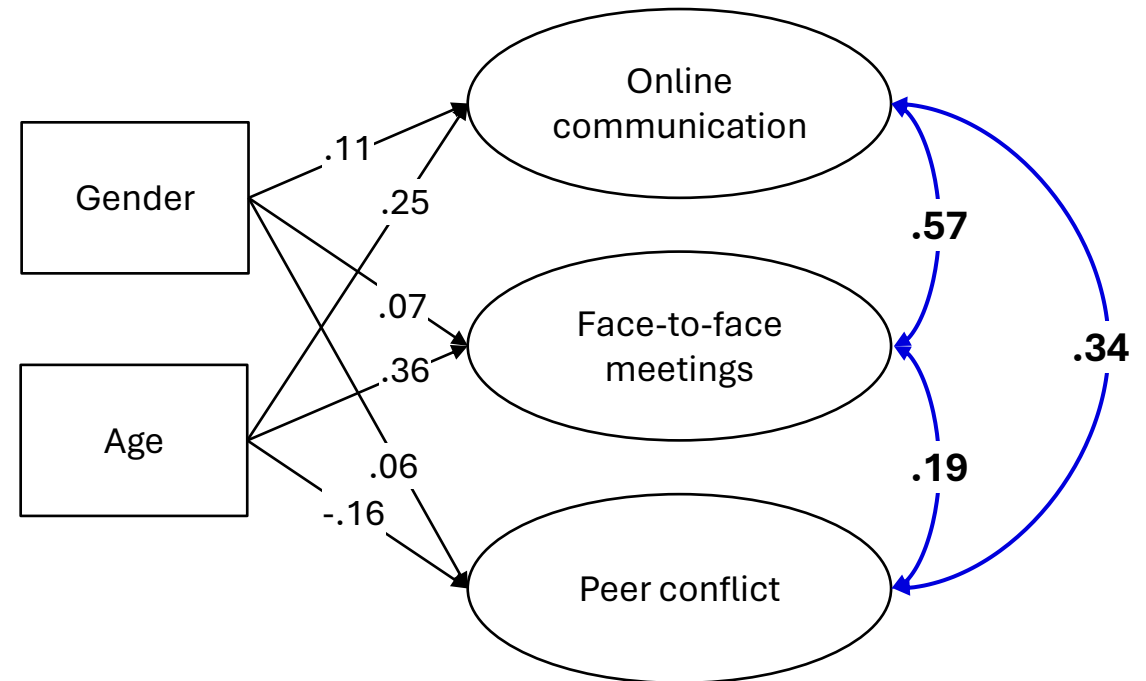
Overall model fit:

$\chi^2 = 609.79$, $df = 173$, $p < .001$

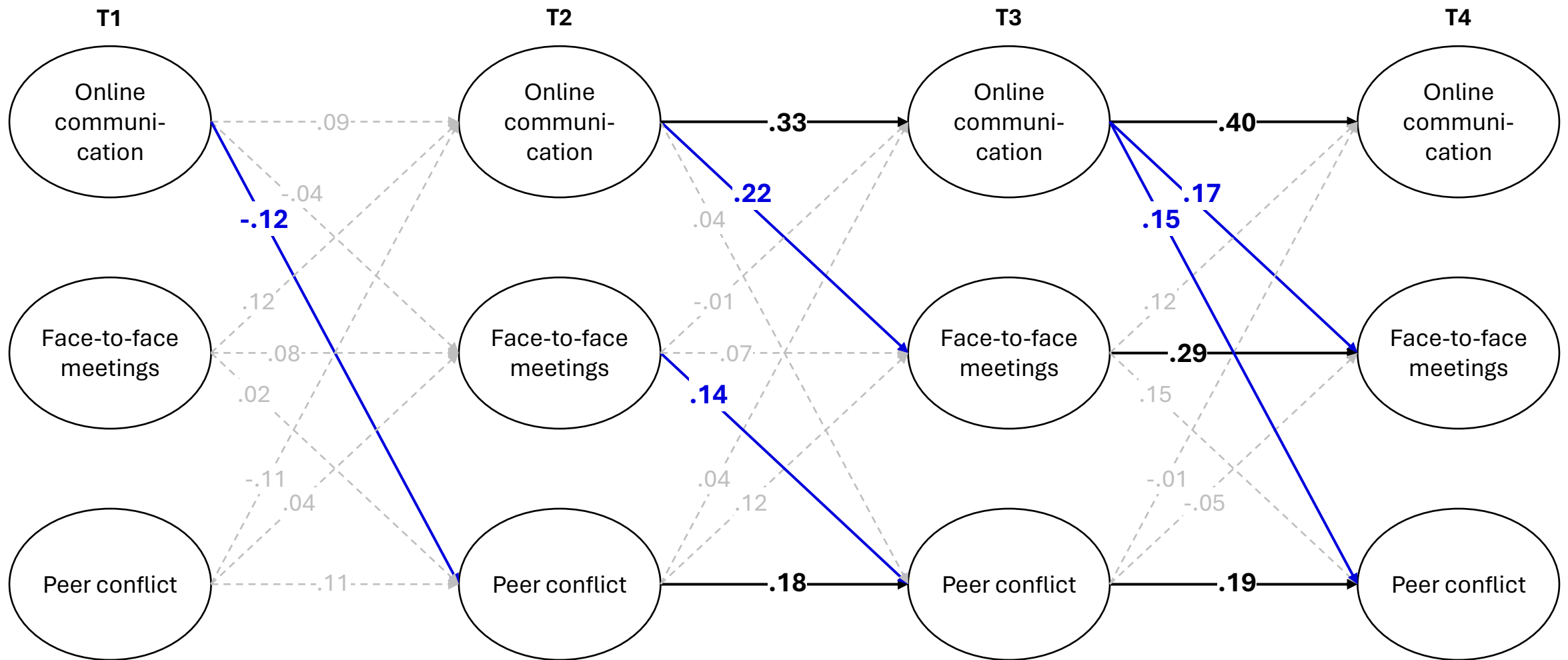
CFI = .96, TLI = .95

RMSEA = .03, 90% CI [.03; .03]

SRMR = .09



Results: Peer conflict, within-person



Summary & future directions

Meeting new people online → more peer support, but also conflicts with existing friends

Support (partial) for existing theories

- **Stimulation:** meetings increase peer support **BUT** only in T3→T4
- **Displacement:** interactions with new people predict peer conflict **BUT** not (lower) support

Inconsistencies in results

- Across time (COVID19? seasonal effects?)
- Across models

Future work

- Refine present models
- Understand the (in)stability of effects
- The nature of conflicts with friends



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Thank you!

