D2M: A ‘decade-to-minutes’ multi-timeframe study of aggression

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Background

• Processes underlying aggression play out over timescales from milliseconds to decades
  – Slowly evolving processes in ‘developmental time’
  – Momentary processes in ‘real time’
  – Interplay across timescales
    • Daily experiences ↔ traits
Acknowledged in major theories of aggression
  • General aggression model
  • I^3 Theory
  • Situational action theory
  • General theory of crime
  • Etc…

‘There are multiple clocks that time us’
Featherman and Petersen (1986)
But a gap in data...

- Previous studies of aggression are EITHER long-term OR momentary

**Longitudinal studies like z-proso...**

- Measure aggression and related constructs every 1-3 years
- Focus on ‘trait’ measures: ‘what are you like in general?’
- Inferences about slowly evolving developmental processes

**Experience sampling studies...**

- Measure changes in aggression over short timescale (e.g. 1 week)
- Focus on ‘momentary’ measures: ‘what are you thinking/doing/feeling right now?’
- Inferences about ‘real-time’ processes of aggression
In D2M we want to bridge this gap...

- Link longitudinal data from z-proso to newly collected ‘momentary’ experience sampling data
- Purpose is to understand the ‘day-to-day’ profiles of people with different long-term aggression trajectories?
How we will do this?

- **Experience sampling**
  - Take an n=300-500 subsample of z-proso
  - Collect information about thoughts, feelings, behaviours in near real time and in the flow of participant daily lives
  - Uses an app downloaded to their smartphone
  - Participant receives notifications to complete questions within the app
  - < 3 mins, 4x a day
  - 2 week duration
What will we ask?

• **Context**
  – Where are you? What are you doing? Who are you with?

• **Provocations**
  – Did someone/something annoy you?

• **Emotions**
  – To what extent do you feel angry, happy, sad etc..

• **Thoughts**
  – E.g., Did you think about hurting someone?

• **Aggressive Behaviour**
  – E.g., Did you shout at someone?
What are our research questions?

- Do people with different developmental histories of aggression show:
  - Differences in day-to-day aggressive, thoughts, emotions, behaviours, provocations?
  - Differences in emotional lability?
  - Differences in strength of coupling between provocation, anger and aggression?
- Does self-control moderate the intraindividual association between provocation, anger and aggression?
- Does emotional lability (estimated from the experience sampling data) mediate the association between ADHD trait levels and aggression?
How do we know it will work?

- **Pilot study in UK: MSc Dissertation by Tridip Borah**
  - Develop a new measure of aggression, the *Aggression-ES*
  - Pre-pilot interviews
    - Check content validity of items
  - Pilot with n=23 young adults in 8 day experience sampling survey

Pilot study results

• **Psychometric results**
  – ML-CFA suggested good within- and between-person reliability
  – Within people, hostile affective states and provocations were associated with aggressive behaviour
  – Physical aggression items will be dropped for z-proso study (too rare)
Pilot study results

- **Compliance and feasibility results**
  - 80% of questions completed
  - Only 3/23 participants dropped out
  - ~70% of responses within 20 minutes of the prompt
  - Asked if the prompts bothered them, 58% of participants answered ‘not at all’ or ‘rarely’
  - Number of prompts per day will be reduced for z-proso study
Qs?