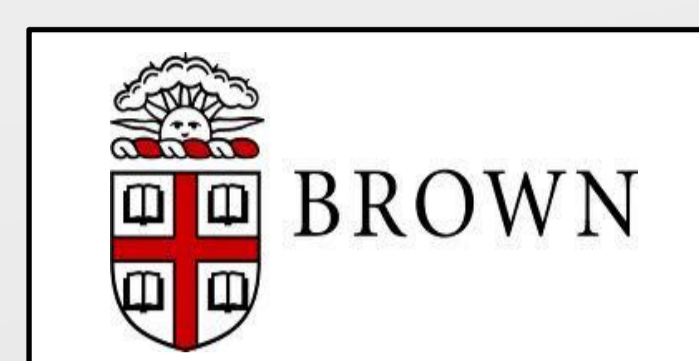


Within-session changes in therapist and client behaviors during an alcohol brief motivational intervention for young men

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Background

- Brief motivational intervention (BMI) has shown **promising results** among young adults.
- But its **underlying mechanisms** are seldom investigated.
- Analyzing the **dynamic processes of therapist and client behaviors** throughout the session might help to better understand mechanisms operative during BMI.

Methods

- We tested the underlying mechanisms of a BMI which was shown to be **effective to lower drinking at 3-month** follow-up when compared to a control group receiving no intervention (Gaume et al, in preparation)
- Psycholinguistic coding** of 174 of the 179 BMI sessions using the MI Skill Code (**MISC 2.1**; Miller et al. 2008) to derive:
 - Counselor
 - frequency of MI-consistent behaviors
 - frequency of MI-inconsistent behaviors
 - percent of open questions
 - percent of complex reflections
 - ratio of reflections to questions
 - Client
 - frequency of change talk
 - frequency of sustain talk
 - strength of change talk (measured for each client utterance on a -3 to +3 scale and averaged over the session)
 - strength of change talk sub-dimensions (Reasons, Ability, Desire, Need, Commitment, Taking steps)
- A random subsample of 42 double-coded BMI sessions (about 20%) established **“excellent” inter-rater reliability** (as defined by Cicchetti 1994, intraclass correlation ranging from 0.79 to 0.99).
- We divided the sessions in thirds to examine within-session processes across time.
- Alcohol outcome was dichotomized into a “changers” group (baseline to 3-month difference greater than the mean of the control group) and a “non-changers” group.
- We then tested for **interactions between time** (thirds) and **outcome group** in **GEE models** accounting for within-person correlations across repeated (time) measures.

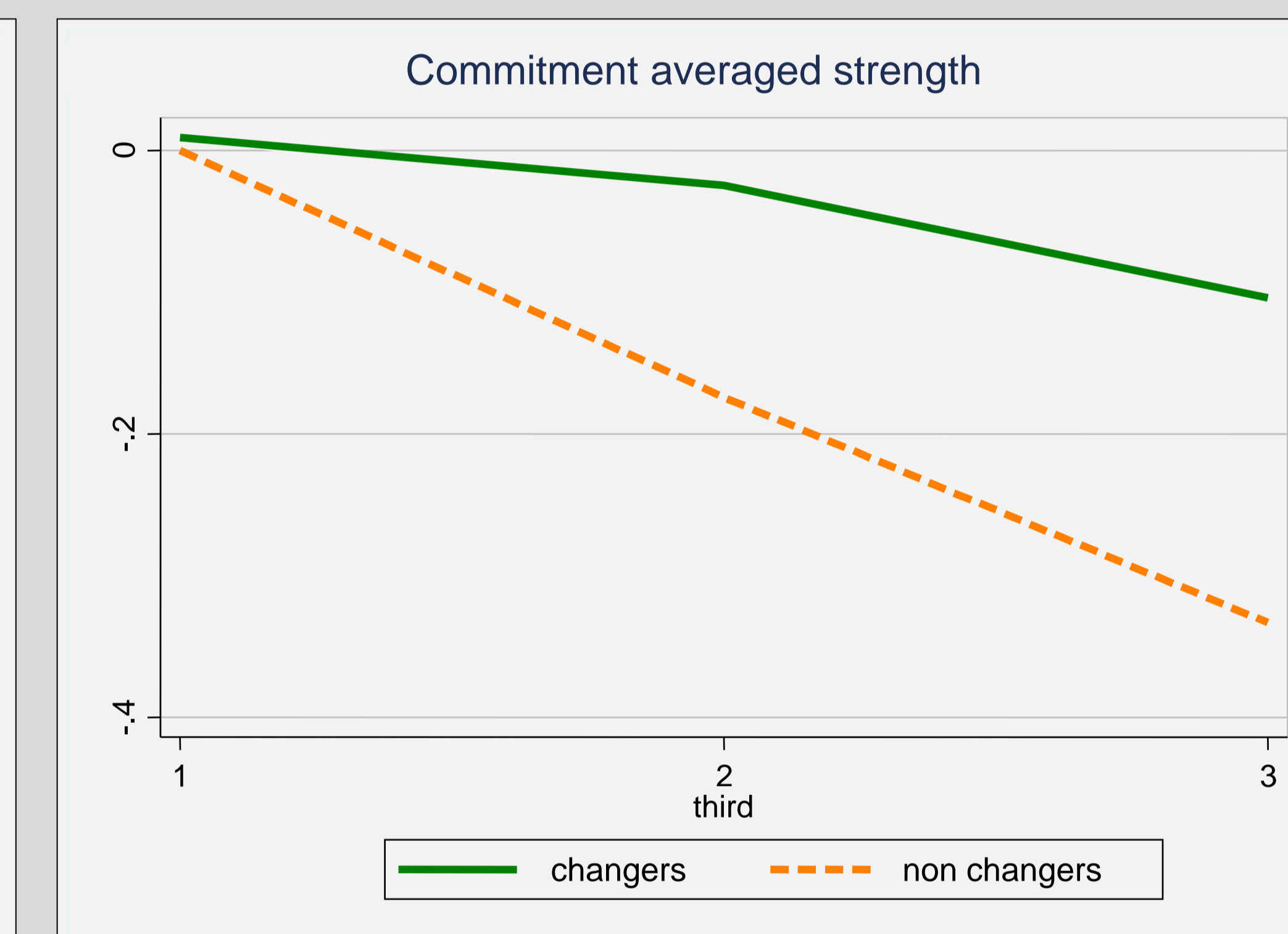
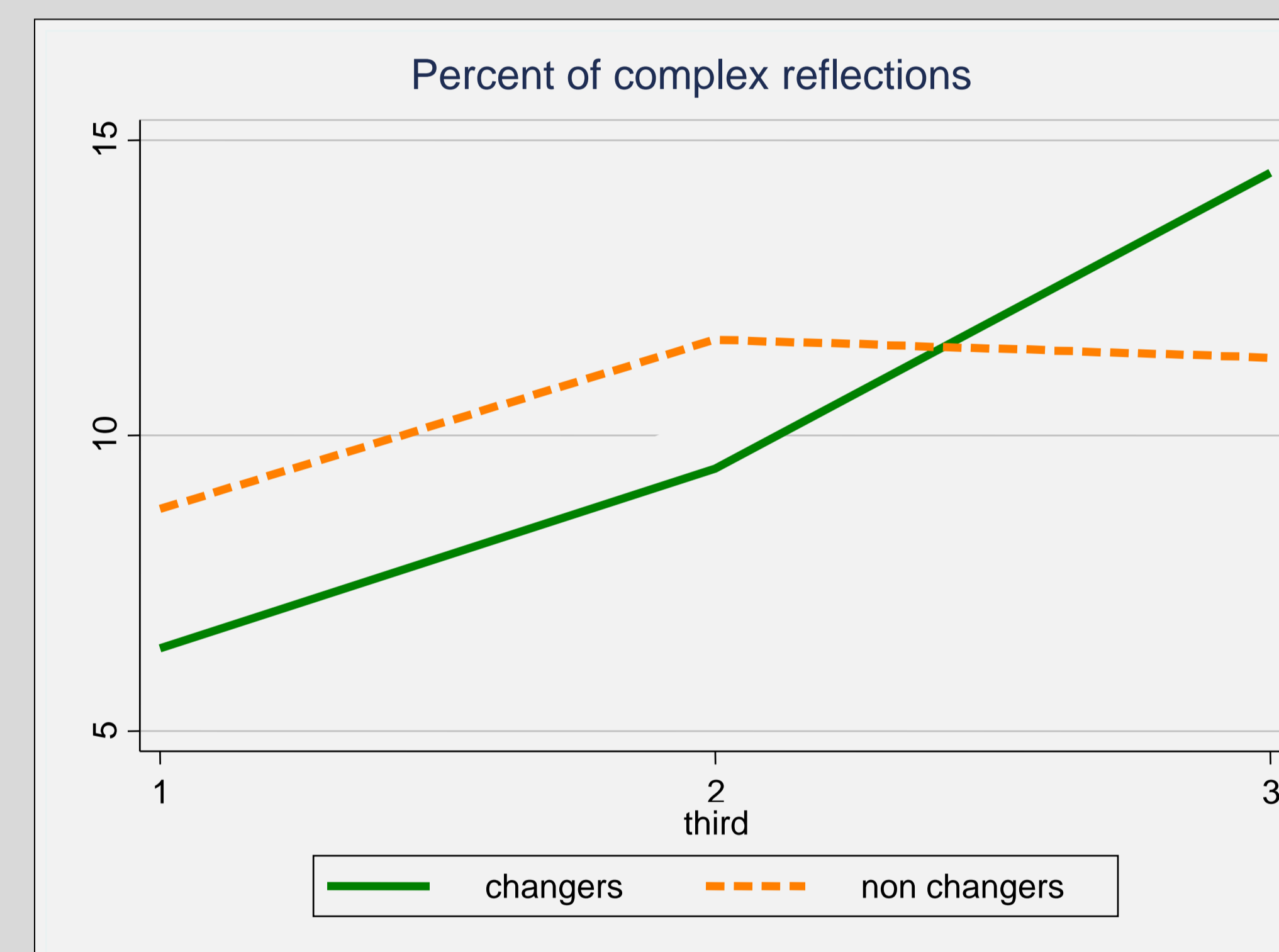
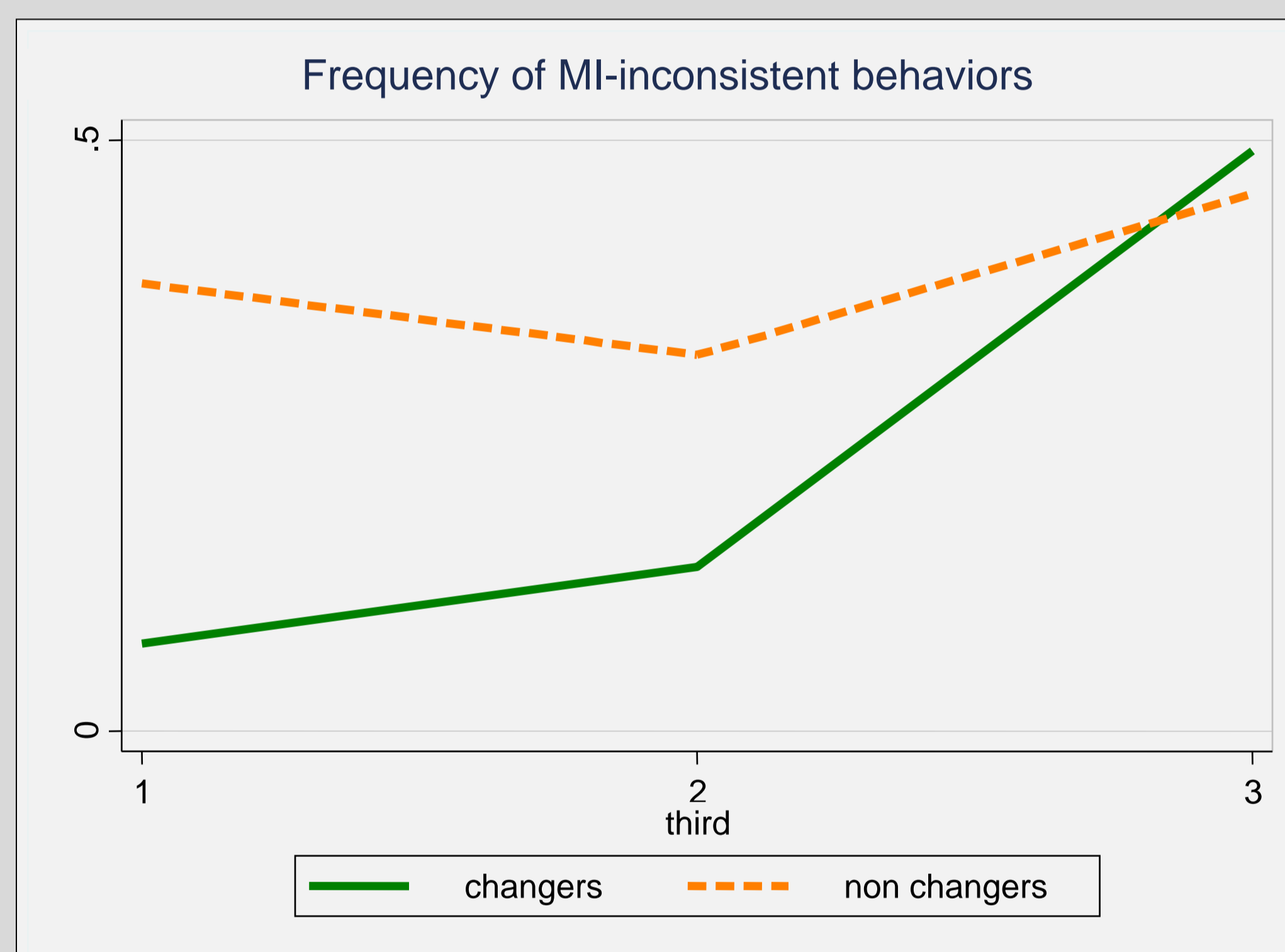
Results

Interactions were non significant for :

- | | |
|--|------------------------------------|
| Counselor | Client |
| ➤ frequency of MI-consistent behaviors | ➤ frequency of change talk |
| ➤ percent of open questions | ➤ frequency of sustain talk |
| ➤ ratio of reflections to questions | ➤ averaged strength of change talk |

- averaged strength of
 - Reasons
 - Ability
 - Desire
 - Need
 - Taking steps

Interactions were significant for :



GEE models:

| | B | SE | z | p | [95% CI] |
|---------------------------|-------------|-------------|-------------|-------------|------------------|
| Changers | -0.30 | 0.13 | -2.43 | 0.02 | -0.55 -0.06 |
| Third 2 | -0.06 | 0.12 | -0.52 | 0.61 | -0.29 0.17 |
| Third 3 | 0.08 | 0.12 | 0.64 | 0.52 | -0.15 0.31 |
| Changers X Third 2 | 0.13 | 0.15 | 0.84 | 0.40 | -0.17 0.42 |
| Changers X Third 3 | 0.34 | 0.15 | 2.29 | 0.02 | 0.05 0.63 |
| intercept | 0.38 | 0.10 | 3.83 | 0.00 | 0.18 0.57 |

| | B | SE | z | p | [95% CI] |
|---------------------------|-------------|-------------|-------------|--------------|-------------------|
| Changers | -2.37 | 2.07 | -1.14 | 0.25 | -6.42 1.69 |
| Third 2 | 2.96 | 2.14 | 1.39 | 0.17 | -1.22 7.15 |
| Third 3 | 2.56 | 2.13 | 1.20 | 0.23 | -1.61 6.73 |
| Changers X Third 2 | 0.08 | 2.71 | 0.03 | 0.98 | -5.22 5.39 |
| Changers X Third 3 | 5.44 | 2.71 | 2.00 | 0.045 | 0.12 10.75 |
| intercept | 8.76 | 1.63 | 5.37 | 0.00 | 5.56 11.95 |

| | Coef. | Std. Err. | z | P> z | [95% CI] |
|---------------------------|-------------|-------------|-------------|--------------|------------------|
| Changers | 0.01 | 0.08 | 0.11 | 0.91 | -0.15 0.17 |
| Third 2 | -0.17 | 0.09 | -1.97 | 0.05 | -0.35 0.00 |
| Third 3 | -0.33 | 0.09 | -3.77 | 0.00 | -0.51 -0.16 |
| Changers X Third 2 | 0.14 | 0.11 | 1.25 | 0.21 | -0.08 0.36 |
| Changers X Third 3 | 0.22 | 0.11 | 1.96 | 0.050 | 0.00 0.44 |
| intercept | 0.00 | 0.06 | 0.00 | 1.00 | -0.13 0.13 |

➤ Changers had fewer MIIN (almost 0) in the first third but had similar numbers of MIIN in the last third

➤ Percent complex reflections increased throughout the sessions of changers while it remained stable throughout those of non-changers

➤ Non-changers decreased their commitment strength (i.e. more commitment not to change in the last third) while changers had stable commitment strength throughout the session.

Discussion

- Dynamic processes** were **at play** during our BMI and were related to better alcohol outcomes.
- The presence of **MIIN in the beginning of a BMI** appeared to be **related to poor outcomes**.
- An **increase in complex reflections** was related to good outcomes.
- As in prior MI process research (Amrhein et al. 2003, Hodgins et al. 2009), **commitment to change was related to outcomes**
- However, the difference here came from **non-changers increasing their commitment not to change** rather than from changers increasing their commitment to change.