Testing the Technical Hypothesis of Motivational Interviewing with Disordered Gamblers

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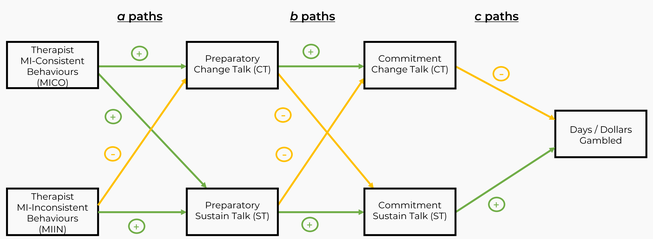
Introduction

- **Motivational Interviewing** (MI) has shown promise as a brief treatment for a variety of concerns, including disordered gamblers (Yakovenko et al., 2015).
- However, there is variation in efficacy across studies (Burke et al., 2003; Lundahl et al., 2010), which indicates the need to better specify ***how*** MI promotes behaviour change.
- The **technical hypothesis** of MI posits that the skillful use of MI techniques will increase within-session client change talk (CT), which in turn predicts behaviour change.
- Previous holistic examinations of the technical hypothesis (e.g., Magill et al., 2014) have focused on CT as a single construct; however, some studies suggest that there may be value in singling out *commitment language*, which appears to be the most predictive type of CT (Hodgins et al., 2009; Amrhein et al., 2003).

Objectives & Hypotheses

- **Objective:** To replicate and extend the findings of Magill et al. (2014) in a sample of disordered gamblers, by differentiating type of change talk (i.e., preparatory vs. commitment language) within the technical hypothesis of MI.
- **Hypothesized technical model:**



Method

- **Participants** were a subsample from a previous RCT examining the efficacy of a brief, telephone MI (*N* = 50).
- Each participant completed a telephone MI with one of eight trained therapists; follow-up assessments were conducted at 3, 6, and 12 months post-MI.
- Each MI session was transcribed and coded by one of two trained coders using the **Motivational Interviewing Skills Code 2.1** (MISC), a behavioural coding system.
- A random subset of 20 MI sessions was double-coded; ICCs ranged from .74 to .98 (good to excellent reliability) for all therapist and participant variables.

Statistical Analyses

- A multiple regression approach to path analysis was used over a model-fitting approach given the small sample size.
- Although model-fitting approaches are preferable (and can provide measures of model fit), results produced for path analysis are typically very similar for both approaches.
- Separate ordinary least squares multiple regressions were performed to evaluate each of the *a*, *b*, and *c* paths.
- Baseline values of outcome variables were included as predictors.
- Beta weights were used as path coefficients in the final models.

Demographics & MI Sessions

- The **mean age** of the sample was 47.76 (*SD* = 10.42); **gender** was evenly distributed (52% female).
- The majority of participants (*n* = 42, 84%) were classified as DSM-IV pathological gamblers (past-year).
- ***Figure 1*** shows mean **therapist behaviours** (per session) by specific MI-Consistent (MICO) and MI-Inconsistent (MIIN) behaviours.

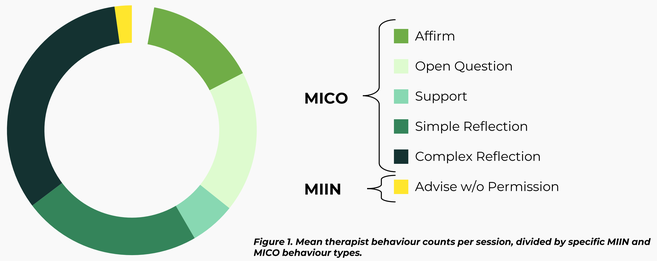


Figure 1. Mean therapist behaviour counts per session, divided by specific MIIN and MICO behaviour types.

Therapist behaviours with mean counts < 1 are not shown.

MICO: Advise w/Permission (.66), Emphasize Control (.90), Reframe (.58).

MIIN: Confront (.06), Direct (.08), Raise Concern w/o Permission (.02), Warn (.00).

- ***Figure 2*** shows mean **participant language** (per session) by Change Talk (CT) and Sustain Talk (ST) types.

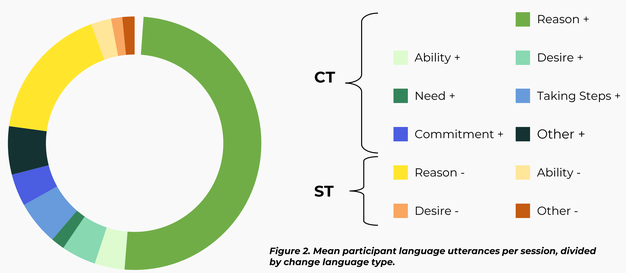


Figure 2. Mean participant language utterances per session, divided by change language type.

Participant variables with mean counts < 1 are not shown.

ST: Need - (.10), Commitment - (.10), Taking Steps - (.80).

Results

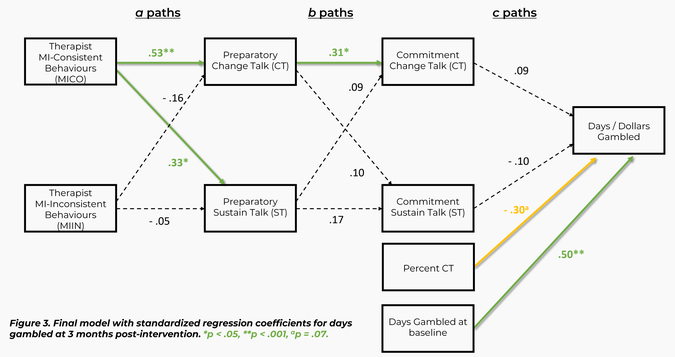


Figure 3. Final model with standardized regression coefficients for days gambled at 3 months post-intervention. **p < .05, **p < .001, †p = .07.*

- ***Figure 3*** shows the model for Days Gambled (3-months); beta weights for significant predictors are displayed as path coefficients.
- No significant links were found between Commitment CT or ST and outcome variables.
- However, when change language was examined as a ratio (percent CT), the ratio approached significance *ONLY* for Days Gambled at 3-month follow-up.
- No significant links between Percent CT and Dollars gambled at 3 months or 12 months, or Days Gambled at 12 months.

Conclusions

- Some of the predicted Technical Hypothesis pathways were supported:
  - MICO → Preparatory CT and ST; Preparatory CT → Commitment CT
- Link between Percent CT and outcome approached significance, but only for Days Gambled at short-term follow-up.
- Results provide further support for the importance of change language in MI, but shift focus to the *ratio* of CT to ST.
- Change language is an indicator MI clinicians can monitor in vivo.
- Results have implications for further study of MI mechanisms.

Acknowledgments

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- If you would like more information about this study or a list of references, please contact Jennifer Swan at the University of Calgary – jswan@ucalgary.ca.