Therapist Intervention Effects on Drinking Across Four Motivational Interviewing Sessions: A Longitudinal Analysis of Process Predictors

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BACKGROUND

- Scientific attention has shifted to understanding mechanisms that account for the efficacy of brief interventions based on the principles of MI (see e.g., Apodaca & Longabaugh, 2009; Miller & Rose, 2009).
- This work has demonstrated the importance of therapist micro-skills (e.g., Questions, Reflections), session global ratings (e.g., MI Spirit), and client language mechanisms (i.e., statements for or against making changes in drinking behavior).
- These variables have predicted both within treatment subsequent mechanisms and overall long-term outcomes in the context of single session MI interventions (e.g., Gaume et al., 2009 ; 2010; Magill et al., 2010; Moyers et al., 2009).

PURPOSE

- The present study examines three additional areas of therapist clinical emphasis that have received comparatively less attention in the MI literature.
- Therapist focus on ambivalence, therapist focus on commitment, and therapist assessment of client goals and drinking are examined in relation to client drinking within treatment and in the context of a multi-session MI intervention.

SAMPLE

- **A**dult alcohol users involved in a large multi-site clinical trial (Project MATCH).
- In Project MATCH, the aftercare (AC; n = 774) and outpatient (OP; n = 952) samples were recruited following detoxification or brief residential treatment .
- The AC sample showed greater alcohol severity than the OP sample, including a greater number of prior treatments, and the majority of participants in both arms met criteria for alcohol dependence, as opposed to abuse.

SAMPLE

- There were n = 261 participants in the AC MET sample and n = 316 in the OP MET sample.
- AC: Age = 42(*SD =* 11); 82% Male; 81% Caucasian; 75% Alcohol Dependent.
- OP: Age = 38(*SD =* 10); 80% Male; 74% Caucasian; 60% Alcohol Dependent).
- Participant Motivation (URICA score; DiClemente & Hughes, 1990) in both the AC and OP arms was the *Action Stage* (*M =* 12.59[*SD =* 1.86], *M* = 12.07[*SD =* 1.77], respectively).
- *So , a pretty severe, adult, primarily male, Caucasian sample that was "ready" to change.*

MOTIVATIONAL ENHANCEMENT THERAPY

- **Four individual treatment sessions**: occurring at weeks 1, 2, 6 and 12.
- **Protocol**: providing personalized feedback, enhancing motivation for change, planning for change and reinforcing progress (Miller et al., 1992).
- **Therapeutic Style, four core principles**: express empathy, support self-efficacy, roll with resistance, and develop discrepancy.

MOTIVATIONAL ENHANCEMENT THERAPY

- **Study therapists**: at least a certificate in counseling and two years of post-education experience, and allegiance to family, systems, or client-centered therapies (Carroll et al., 1994).
- **Training:** consisted of didactic instruction and extensive supervised practice sessions.
- **Supervision:** one-third of sessions were reviewed by the primary supervisor - Dr. Miller; therapists additionally received weekly on-site supervision (Carroll et al., 1994).
- *So these were well-trained and delivered MI interventions*.

MEASURES

- Therapist session report contained 12 measures of clinical emphasis (likert extensiveness rating: “not at all”, “a little”, “somewhat”, “considerably”, “extensively”).

- Three composite therapist measures were created for each MET session.

1. Ambivalence/Discrepancy (3 items).
2. Commitment to Change AC (3 items).
3. Assessment of Goals /Drinking (2 items).

Two core elements of the MI therapeutic style – focus on commitment but honor ambivalence, as well as one general assessment item.

- **Alcohol Measures:** Arcsine PDA; Square Root DDD (Form-90; Miller 1996). Measured in between treatment sessions to enable prospective analyses.

ANALYSES

- **Data Analyses:** Mixed Effects models examined the effect of therapist predictors on alcohol use (PDA; DDD) over a 12-week treatment period.
- Whether these effects interacted with time and client baseline motivation (URICA; DiClemente & Hughes, 1990) was additionally examined (interactions in MLM: Preacher, Curran, & Bauer, 2006).

DESCRIPTIVE RESULTS

Therapist focus on Ambivalence /Discrepancy occurred "somewhat" in AC /OP, slightly higher with OP participants.

An emphasis on Commitment was "considerably" emphasized on average over time. This focus was higher AC participants.

For Goal Assessment, AC emphasis was somewhat higher, and occurred "considerably".

AC stability of abstinence and focus on goals /commitment

OP lower yet increasing abstinence and focus on ambivalence

Therapist Process Predictors	**Time 1 M(SD)**	**Time 2 M(SD)**	**Time 3 M(SD)**	**Time 4 M(SD)**
Aftercare				
Ambivalence (range 3 – 15)	9.87(2.36)	9.70(2.41)	9.63(2.37)	9.25(2.70)
Commitment (range 3 – 15)	10.42(2.10)	12.11(1.94)	11.79(1.90)	11.52(2.09)
Assessment (range 2 – 10)	5.33(1.70)	7.55(1.34)	7.63(1.58)	7.55(1.59)
PDA in between sessions		**96.29(15.19)**	**93.86(17.78)**	**90.46(21.69)**
DDD in between sessions		**0.81(3.00)**	**2.53(5.51)**	**3.02(5.89)**
Outpatient				
Ambivalence (range 3 – 15)	10.29(1.78)	10.47(1.93)	10.48(2.14)	9.93(2.50)
Commitment (range 3 – 15)	9.93(1.96)	11.30(1.74)	11.40(1.79)	11.43(1.82)
Assessment (range 2 – 10)	7.56(3.33)	7.11(1.45)	7.21(1.56)	7.20(1.52)
PDA in between sessions		**77.99(33.85)**	**79.41(29.39)**	**89.90(26.04)**
DDD in between sessions		**4.10(7.07)**	**5.03(5.65)**	**4.65(5.50)**

DRINKING WITHIN TREATMENT

Commitment to change predicted greater PDA among AC and OP, and reduced DDD for OP clients.

Exploring client ambivalence / discrepancy predicted greater DDD among OP participants, and at a trend level for AC.

Assessment of client goals / drinking predicted greater DDD at the .05 level among AC participants.

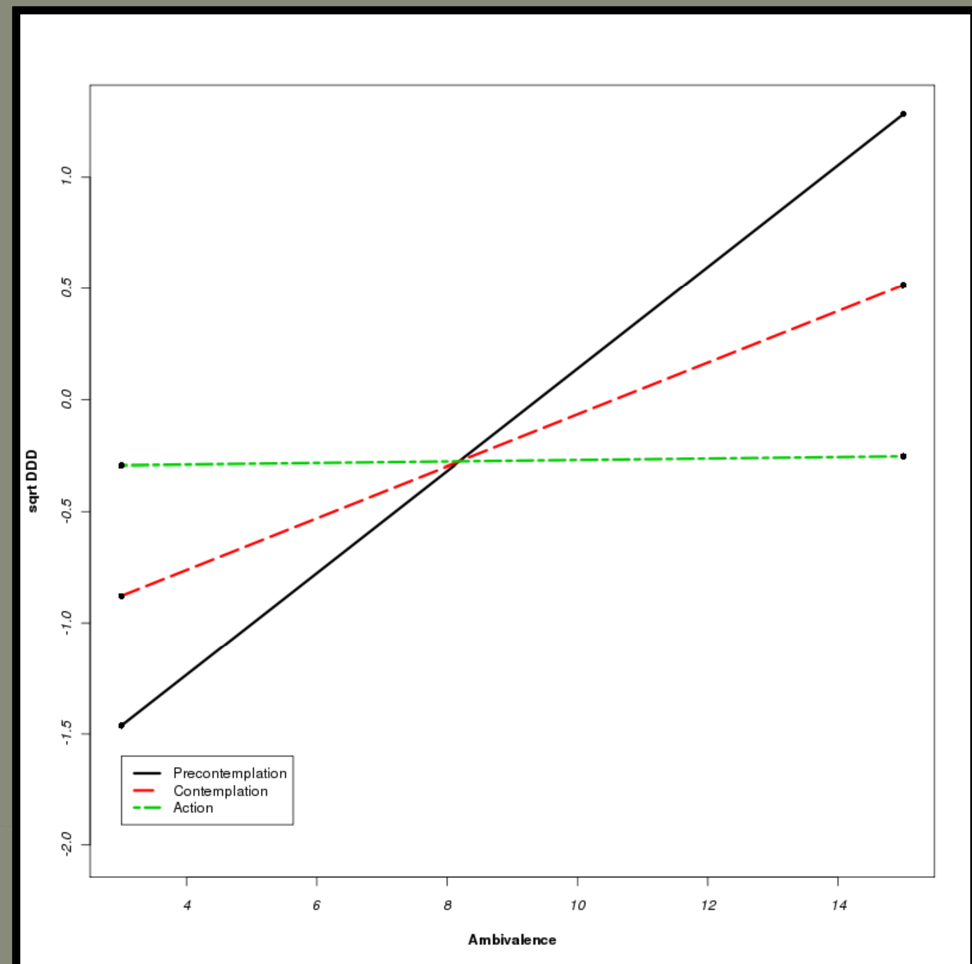
	PDA			DDD		
Fixed Effects (Level 2)	γ	t	p	γ	t	p
Aftercare						
Time	-0.06	-4.48	<.001	0.29	4.38	<.001
Ambivalence	-0.00	-0.78	.44	0.04	1.31	.19
Commitment	0.02	2.30	.02	-0.07	-1.90	.06
Assessment	-0.01	-1.59	.11	0.08	1.94	.05
AIC			**33.3**			**1674.7**
BIC			**60.9**			**1702.3**
Model at early treatment						
Ambivalence by time	-0.01	-1.78	.08	0.04	1.53	.13
Commitment by time	0.01	1.66	.09	-0.05	-1.15	.25
Assessment by time	-0.00	-0.29	.77	-0.04	-0.80	.42
AIC			**34.8**			**1653.8**
BIC			**72.7**			**1713.7**
Outpatient						
Time	-0.02	-1.92	<.001	0.31	5.44	<.001
Ambivalence	-0.01	-1.15	.25	0.07	2.39	.02
Commitment	0.02	2.58	.01	-0.10	-2.95	<.01
Assessment	-0.01	-1.68	.09	0.02	1.01	.31
AIC			**434.6**			**430.4**
BIC			**480.0**			**492.8**
Model at early treatment						
Ambivalence by time	0.08	1.19	.23	0.00	0.08	.93
Commitment by time	0.00	0.33	.76	-0.05	-1.18	.24
Assessment by time	0.00	0.40	.68	-0.04	-0.93	.35
AIC			**2436.3**			**2451.3**
BIC			**2481.7**			**2491.7**

THERAPIST INTERVENTION BY CLIENT READINESS

Focus on ambivalence was associated with the most positive slope in AC DDD in:

1. Precontemplation Stage
($\gamma = 0.23(0.08)$, $t = 2.84$, $p < .005$)

2. Contemplation Stage
($\gamma = 0.12(0.04)$, $t = 3.08$, $p < .005$)



DISCUSSION

- Therapist reported intervention emphases are important to subsequent patterns of drinking within a multi-session MI.
- Therapist effort to elicit commitment predicted greater rates of abstinence in both arms, and reduced drinking quantity in OP.
- Therapist focus on ambivalence was associated with greater drinking quantity among OP participants, and when motivation was low among AC participants.
- Patterns of alcohol use within treatment moderately predicted follow-up outcome up to 12 months *(AC r = .22 to .54; OP r = .31 to .58)*, supporting the importance of these clinical processes in relation to BMI mechanisms.

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Questions?