

MET for pregnant substance-abusing women: Does baseline motivation moderate efficacy?



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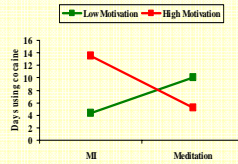
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Motivation as a Moderator of MET

- Several studies have suggested that baseline motivation may act as a **disordinal** moderator of the efficacy of motivational interventions.
- In **disordinal** moderation, a given factor (e.g., baseline motivation) may result in worse effects vs. an alternate condition, rather than a simple **lack** of effects.



[Sample data from Rothenrow et al. (2004). Motivational enhancement and coping skills training for cocaine abusers: Effects on substance use outcomes. *Addiction*, 99, 862-874.]

NIDA Clinical Trials Network Study 0013

- NIDA CTN-0013 randomly assigned 200 pregnant substance-abusing women (most unmarried and unemployed; 40% Caucasian; marijuana and cocaine were most common drugs of abuse) to either three sessions of Motivation Enhancement Therapy (MET) or treatment as usual (TAU).
- Results suggested no differences between MET and TAU in either treatment retention or drug use outcomes.
- The present study was conducted in order to:
 - Evaluate whether disordinal moderation by baseline motivation status can explain, in part, the negative findings from CTN-0013
 - Evaluate the utility of two measures of baseline motivation:
 - The University of Rhode Island Change Assessment (URICA) scale
 - A single question regarding drug use goal (quit completely, cut down, no change, etc.)

[For more detail, see Winhusen et al. (in press). Motivational enhancement therapy to improve treatment utilization and outcome in pregnant substance users. *Journal of Substance Abuse Treatment*.]

Baseline motivation did not moderate efficacy (trend in unexpected direction!)

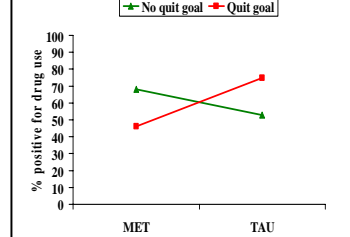
Table 1. Estimated marginal means, odds ratios, and

logit *d* for MET/TAU and baseline motivation subgroups

	URICA formula			
	MET	TAU	OR	Logit <i>d</i>
1 month				
Low motivation	0.46	0.54	0.72	-0.18
High motivation	0.67	0.61	1.34	0.16
3 months				
Low motivation	0.53	0.50	1.15	0.08
High motivation	0.56	0.61	0.8	-0.12
	Self-report goal question			
	MET	TAU	OR	Logit <i>d</i>
1 month				
No quit goal	0.35	0.41	0.76	-0.15
Quit goal	0.54	0.47	1.34	0.16
3 months*				
No quit goal	0.31	0.48	0.48	-0.40
Quit goal	0.54	0.31	2.53	0.51

Note. Estimated marginal means are derived from GEE equations, and represent predicted likelihood of being drug-free; OR represents probability that a participant in the MET condition was drug free, as compared to the TAU condition; Logit *d* is an effect size analog of Cohen's *d*, for dichotomous outcomes.

Figure 1. Percent of participants positive for drug use at 3-month follow-up, as a function of baseline quit goal (yes/no) and intervention condition*



* (Wald $\chi^2[1] = 4.66, p = .031$)

Sample URICA items

- As far as I'm concerned, I don't have any problems that need changing.
- I've been thinking that I might want to change something about myself.
- I am finally doing some work on my problem.
- I have a problem and I really think I should work at it.

Drug use goal question

What is the goal you have chosen for yourself about using drugs at this time?

- No clear goal
- Controlled use
- Quit completely
- [Other options that are variations of the above]

Why the unexpected result?

Previous studies have shown moderation effects for baseline motivation, in the opposite direction suggested here...

- Change during pregnancy may be unique.** Pregnancy is a time of natural declines in substance use, and greater belief in the need for change; social pressures may also be reversed.
- Powerful outside forces for change leave little room for treatment effect.** Drug use prevalence in this sample declined from 71% at baseline to 47% at 3-month follow-up, and pregnancy is a powerful motivator for change.
- Community vs. university therapists.** Previous studies showing disordinal moderation used university-based therapists, whereas CTN-0013 used community therapists.
- Treatment matching methodology is flawed.** Single individual difference variables have little ability to forecast patterns of responses. Generalizability and Social Relations Modeling approaches can (Laake & Ondersma, 2008).
- Moderation effects are unstable.** Such effects by definition involve smaller cells, and should be interpreted with caution.

Conclusions

- Disordinal moderation does not explain the negative findings of CTN-0013.** Little overall variance was explained.
- Moderation by baseline motivation remains unclear.** Previous findings have been intriguing, but more research is needed.
- The single drug use goal question may have utility.** It is simple, intuitive, and maps well onto research regarding the importance of change commitment (e.g., Amrhein et al., 2003).

Acknowledgements

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