

Marijuana Use May Negatively Impact Other Health Behavior Change

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Introduction

- Negative health behaviors rarely occur in isolation.
- There is growing evidence that changes in one targeted health behavior increases the likelihood of changing other related targeted behaviors.
- However, little is known about how the presence of an untargeted health risk behavior might impact the change of targeted behaviors.
- This study used data from CHOICES *Plus* to examine the impact of marijuana use (untargeted behavior) on reducing risk level alcohol consumption (>3 drinks/day and/or >7 drinks/week) and use of effective contraception (targeted behaviors) in women at risk of an alcohol-exposed pregnancy (AEP).

CHOICES Plus

CHOICES Plus was a two-group Randomized Controlled Trial with a 1:1 allocation (n=261) to the CHOICES *Plus* condition or the Brief Advice condition to test the efficacy of an intervention to prevent alcohol- and tobacco-exposed pregnancy.

Setting and Recruitment

CHOICES Plus took place in 12 primary care clinics associated with a large urban safety net healthcare system in Harris County, Texas. Harris Health, one of the largest public health systems in the U.S., serves approximately 4.25 million residents in metropolitan Houston. Women patients who were 18–44 years, at risk of pregnancy, and drinking above risk level were recruited using a brief screening instrument completed either in person in the clinics (60.0%) or by telephone (40.0%) in response to posters placed in the clinic waiting rooms.

Intervention

The CHOICES Plus intervention was a motivational Interviewing based-intervention delivered by trained masters' level Behavioral Health Specialists. The 2 session intervention targeted risk alcohol use, cigarette smoking, and ineffective use of contraception (i.e., risk of unplanned pregnancy). The goals of the intervention included:

- Encourage a contraceptive counseling visit
- Provide norms-based feedback
- Increase motivation to change the target behaviors
- Decrease temptation and increase confidence
- Facilitate goal setting
- Develop change plans

Outcomes

Women were assessed at 3, 6, and 9 months post-intake. Women receiving the CHOICES Plus intervention had greater odds of reducing the risk of AEP (OR= 2.60; 95% CI= 1.54, 4.40), of reducing risk level drinking (OR=1.85; 95% CI=1.06, 3.25) and of using effective contraception (OR=2.99; 95% CI=1.70, 5.27) at 9 months than the odds of the women receiving Brief Advice.



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Methods

This study examined the impact of marijuana use, an untargeted behavior, on reducing risk level alcohol consumption and increasing use of effective contraception, targeted risk behaviors, at 9 months.

Sample

Study women who received the CHOICES *Plus* intervention and had outcome data at 9-months (n=109).

Measures

Alcohol Use, sexual intercourse, and contraception were assessed at 9-months using the Timeline Followback. Data were divided into 30 day periods.

Variables:

Reduced Risk Drinking - A woman was considered to be at reduced risk drinking at the 9-month assessment if she was not drinking at risk level (no days with >3 drinks and no weeks with >7 drinks) in the 90 days prior to the assessment.

Effective Contraception - A woman was considered to be using effective contraception at the 9-month assessment if she used effective contraception every time she had sexual intercourse in the 90 days prior to the assessment.

Reduced Risk of AEP - A woman was considered to be at reduced risk of an alcohol-exposed pregnancy at the 9-month assessment if she was not drinking at risk level, or was using effective contraception every time she had sexual intercourse, or both in each of the 30 day periods in the 90 days prior to the assessment.

Marijuana User – Reported any marijuana use in the previous 30 days at Intake and at the 9-month assessment.

Results

53.9% of the women who received the CHOICES *Plus* intervention were designated as “Marijuana Users” at the 9-month assessment (n=105).

Outcome variable	Marijuana User	Non-Marijuana user	OR	p
Reduced Risk Drinking	25.9%	50.0%	2.867	.013
Effective Contraception	33.3%	60.0%	3.000	.007
Reduced Risk of AEP	46.7%	73.3%	3.143	.007

Discussion

- Women who continued to use marijuana through the outcome period in CHOICES Plus had overall worse outcomes.
- The use of marijuana interfered with the effectiveness of the CHOICES Plus intervention to facilitate change in the targeted behaviors.
- Marijuana users were less likely to reduce risk level drinking, increase effective contraception use, and reduce the risk of AEP.

Conclusion

- Behavioral Health interventionists need to be aware of the negative influence that an untargeted risk health behavior can have on the probability of positive change in targeted health risk behaviors
- studies addressing multiple risk behaviors simultaneously are needed, particularly when marijuana use is prevalent in the study population.
- We are currently testing the addition of marijuana as a target behavior and comparing the counselor-delivered intervention to one delivered by a tablet (NIAAA, 1R01AA022924).

Reference

Velasquez, M.M., von Sternberg, K., Floyd, R.L., Parrish, D., Kowalchuk, A., Stephens, N.S., Ostermeyer, B., Green, C., Seale, J.P., Dolan-Mullen, P. (2017) Preventing alcohol- and tobacco-exposed pregnancies with CHOICES Plus in primary care clinics: A randomized controlled trial. *American Journal of Preventive Medicine*, 53(1), 85-95. doi: 10.1016/j.amepre.2017.02.012.

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