

# Impact of Twelve-Step Meetings in the Recovery of Chemically Dependent Individuals

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## Background

•Twelve-step programs (e.g. Alcoholic Anonymous - AA, Narcotics Anonymous-NA) are free, self-maintained support groups that provide a course of action for recovery in chemically dependent individuals centered around anonymity, regularly scheduled meetings, and sponsorship from more experienced members. Much of the literature on its effectiveness in maintaining sobriety has centered around objective data, but most fail to obtain subjective information by not directly asking its subjects for their perspectives. <sup>1,2,3,4</sup>

## Research Question

What impact does attending twelve-step meetings have on the sobriety of chemically dependent individuals?

**Null hypothesis:** There is no significant difference on the impact of attending twelve-step meetings in the ability of chemically dependent individuals to maintain their sobriety (as measured by sobriety length).

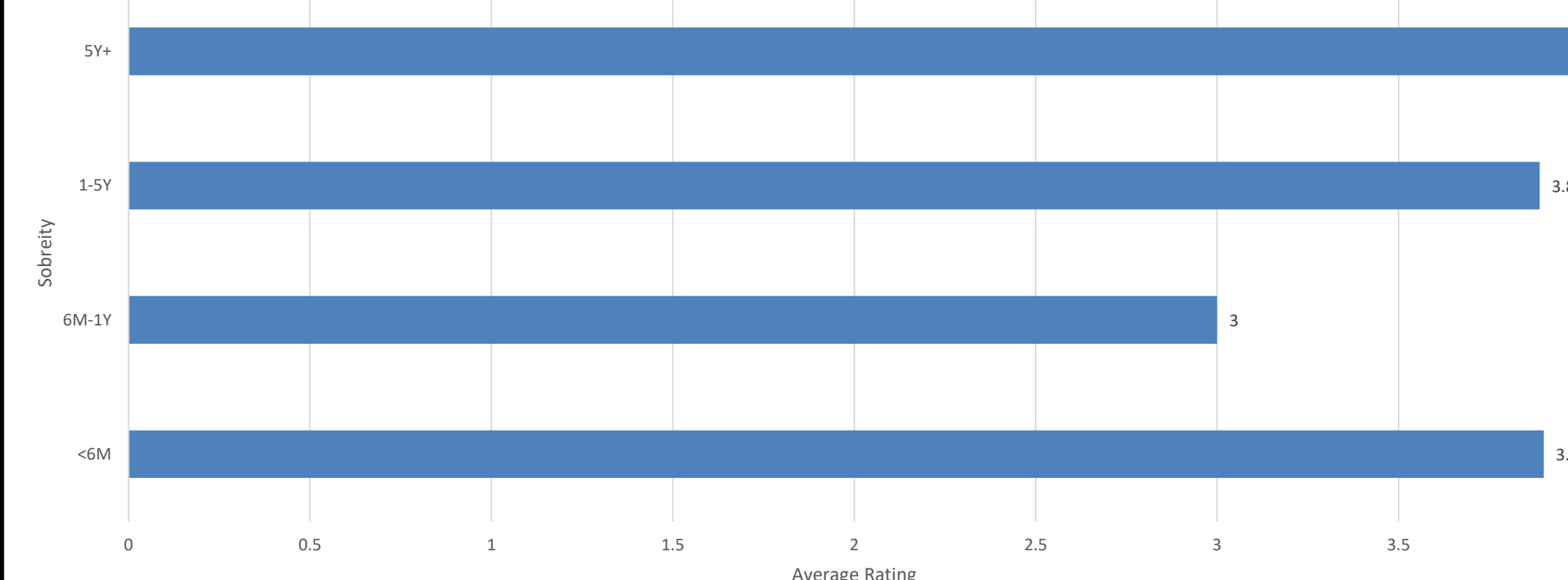
**Alternate hypothesis:** Attending twelve-step meetings has a significant impact on the ability of chemically dependent individuals to maintain their sobriety length.

## Methods

Anonymous surveys were given to attendees across open Northwest Ohio AA or NA meetings, between January and February 2020. Participants were asked to rank how important meetings were to them in their recovery, and to compare the perceived beneficial effects of meetings to their associated medical treatment. Surveys were categorized by sobriety length (< 1 yr or ≥ 1 yr), and each response was averaged to give a score. A two-tailed t-test was used to determine association between average score versus sobriety length.

## Data

Average 12-Step Importance by Sobriety Length

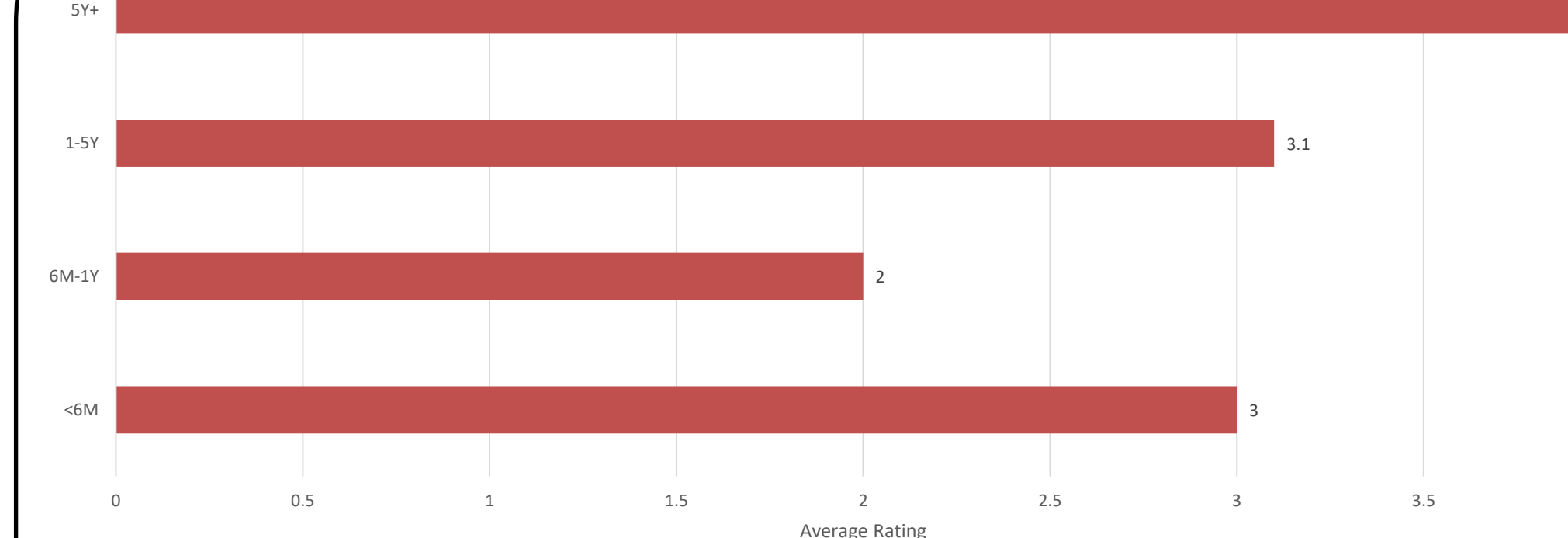


Legend: 0 = Not At All Important, 1 = Not Very Important, 2 = Neutral, 3 = Somewhat Important, 4 = Very Important

	Sobriety Less than 1 Y	Sobriety 1Y+
N (sample size)	11	12
Df (degrees of freedom)	10	11
Mean	3.82	3.92
SS (sum of squared differences from the mean)	1.64	0.92
S2 (sample variance)	0.16	0.08

	Value
Significance Level	0.05
Power Achieved	10%
Common Standard Deviation	0.34
T Value	-0.68
P Value	0.51

Average Perceived Benefit of 12-Step Meetings vs. Medical Treatment by Sobriety Length



Legend: 0 = Far Less beneficial, 1= Less Beneficial, 2 = Equally Beneficial, 3= More Beneficial, 4 = Far More Beneficial

	<1 Y	1Y+
N (number of subjects)	5	7
Df (degrees of freedom)	4	6
Mean	2.8	3.5
SS (sum of squared differences from the mean)	2.80	6.5
S2 (sample variance)	0.7	1.08

	Value
Significance Level	0.05
Power Achieved	29%
Common Standard Deviation	0.86
T Value	-1.24
P Value	0.24

## Results

Of the 24 responses, 33% were from women and 67% were from men. Eight (30%) were introduced to meetings by treatment facilities, 6 (25%) by family/friends, 5 (21%) by self and by court order, and 3 (12.5%) by a counselor.

Among all responses, the most common response for the importance of twelve-step meetings in their recovery was "Very Important". There was no significant difference in this answer between subjects with a sobriety length less than one year versus over one year.

Among all responses, the average rating for how beneficial twelve-step meetings are to subjects compared to medical treatment was "More Beneficial". There was no significant difference in this answer between subjects with a sobriety length less than one year versus over one year.

## Limitations

This research focused on NA participants' subjective assessments of importance and perceived benefit of their meetings on maintenance of sobriety, which is not routinely found in literature. It was, however, not without limitations. Multiple variables impacted the ability to engage with NA or AA participants including geography, meeting availability and proximity to participants, and participants' schedules. Although four twelve-step meetings were attended, at several meetings there were very few and even no attendees. Since the meetings attended were in a relatively small geographic area around Findlay, Ohio, several of the attendees were encountered repetitively and were not permitted to complete more than one survey. The time period to collect surveys was truncated earlier than planned due to the outbreak of COVID-19 that resulted in a nationwide quarantine and cancellation of meetings. The required sample size to reach 80% power was not reached for either perceived importance nor perceived benefit; (186 and 24 respectively). This creates a high likelihood of a type II error of indicating that there was no difference in rating between sobriety groups when a difference did exist. Surveys were collected from a total of four twelve-step meetings around the Findlay/NW Ohio area. These results may have a low external validity to attendees in other regions. A calculation to determine whether there was a significant difference between the four initially planned sobriety length subgroups (<6 months, 6 months – 1 year, 1-5Y, 5Y+) could not be calculated due to inadequate sample sizes. For this reason, the t-test calculation was modified to only two groups (sobriety <1Y vs. ≥1Y). Further research is needed with larger sample sizes of subjects to obtain results with clinical significance.

## References

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