Prime For Life® Outcomes Among Participants Who Use Drugs

Michele A. Crisafulli, MA, Blair Beadnell, PhD, & Pamela A. Stafford, MA

Prevention Research Institute, Lexington, KY

Summary

Prime For Life (PFL) instructors often ask about the program's effectiveness for participants who use drugs. To address this topic, we examined PFL participant data from 10 states across the United States (N = 4,415). We identified 1,045 (23.6%) drug users (i.e., reporting drug use in the 90 days before PFL). Solely using drugs was uncommon, as most drug users (n = 928, 88.8%) also reported drinking alcohol. Compared to participants we refer to here as "drinkers" (those reporting alcohol use only, n = 2,720), drug users were younger. They also were less likely to have been married or to have completed an advanced degree (i.e., a bachelor's or graduate degree). Drug users were more likely than drinkers to have been arrested for drug possession, though in both groups arrests for impaired driving were most common.

In terms of benefits occurring during PFL participation, drug users improved on outcomes specific to drugs (e.g., motivation and intentions to decrease use). On outcomes relevant to all participants, drug users typically benefited similarly to drinkers. Additionally, drug users started "worse off" than drinkers on some outcomes (e.g., perceived risk to valued things, impaired driving behavior and intentions). On these, they often experienced greater improvements than drinkers such that, by posttest, their scores no longer differed. Finally, most drug users (≥80%) found PFL helpful. Overall, these scores were slightly lower than drinkers, though the pattern and conclusions about acceptability appear similar. These results suggest that PFL benefits drug-using participants, supporting continued use of the program with this group.

Introduction

Prime For Life (PFL) is an indicated prevention program for substance abuse. The legal system refers many individuals to PFL, often for impaired driving but sometimes for other offenses such as drug possession. Participants come to PFL having used a range of substances including alcohol, marijuana, other illicit drugs, and/or prescription medications for non-medical purposes. Because of this, Prevention Research Institute's (PRI) Training and Research teams are frequently asked how PFL works for individuals who use drugs. While research has shown PFL to be effective for participants overall, we have not previously looked to see how many PFL participants use drugs, whether they differ from other participants, and how much they benefit from the program.

Methods

We used data PRI collected from 10 states across the country in 2011 and 2012. A total of 4,724 PFL participants completed questionnaires immediately before and after participating in PFL. However, due to missing data, we excluded 309 participants, leaving an analysis sample of 4,415. Most participants were male (70.8%). Age ranged from 15 to 80 years (SD = 12.3) with a mean of 33.3. Participants identified as African American/Black (11.8%), Latina/Latino/Hispanic (3.9%), White/Caucasian (78.1%), and other races/ethnicities including multiracial (6.2%). Slightly less than half (45.0%) had never been married, and the majority (88.7%) had at least a high school education or GED.

We compared participants who reported only drinking to those who reported drug use on demographic and background variables, as well as several key outcomes:
- motivation to decrease or keep drinking to low-risk levels
- perceived risk (number of drinks perceived as high risk and extent to which substance use risks valued things)
- prior and intended substance use behaviors (usual and maximum number of drinks, as well as impaired driving).

In addition, we examined whether drug users made significant changes on variables specifically related to drug use, including motivation to decrease/discontinue drug use, and prior versus intended drug use behavior.
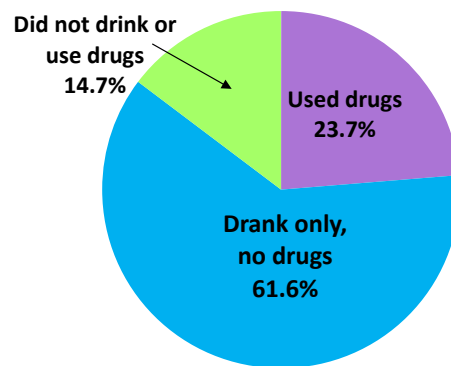
We used chi-square tests to examine differences between groups on demographic and background variables. We then used Generalized Estimating Equations Type III tests to investigate differences between groups on outcome variables. Finally, to examine whether drug users made significant improvements on drug-specific variables, we used Generalized Estimating Equations Type III tests and the non-parametric binomial test. For all analyses, an alpha level of .05 was used as the criterion for statistical significance.

Research Questions and Findings

What are the substance use characteristics of PFL participants?

Figure 1 shows that participants most commonly reported using only alcohol. However, almost a quarter reported using drugs, with or without concurrent alcohol use. The remainder reported abstinence from both alcohol and drugs.
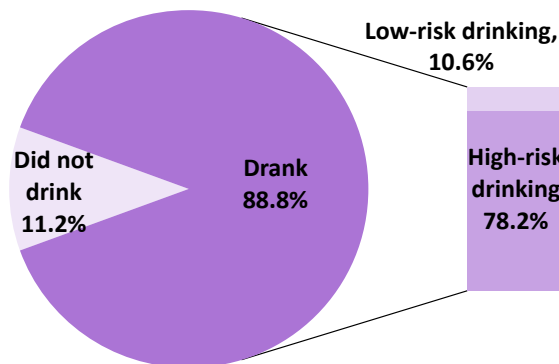
Figure 1. Participants' self-reported substance use in 90 days before PFL (*N* = 4,415)

How many drug users also drink?

The vast majority of drug users also reported drinking alcohol. Of drug users who drank, most did so in high-risk amounts (Figure 2).

Figure 2. Substance use patterns among drug users (*n* = 1,045)

Combining the information from these figures, what do we learn about the substance use patterns of people who attend PFL?
Table 1 shows the breakdown of substances participants reported using in the 90 days before PFL.

Table 1. Substance use among the full sample of PFL participants (*N* = 4,415)

	Percent	Number
No alcohol or drug use	14.7%	650
Drank, no drug use	61.6%	2,720
Used drugs		
Did not drink	2.7%	117
Drank in low-risk amounts	2.5%	111
Drank in high-risk amounts	18.5%	817

The fact that the number of drug users who either did not use alcohol, or did so in low-risk amounts, was relatively small guided the rest of the analyses. For simplicity, we combined all drug users into one group. We then compared them to participants who drank alcohol but did not use drugs (hereafter referred to as "drinkers"). Appendix A provides more detailed information about differences among drug users who drank in high-risk amounts, low-risk amounts, or not at all.
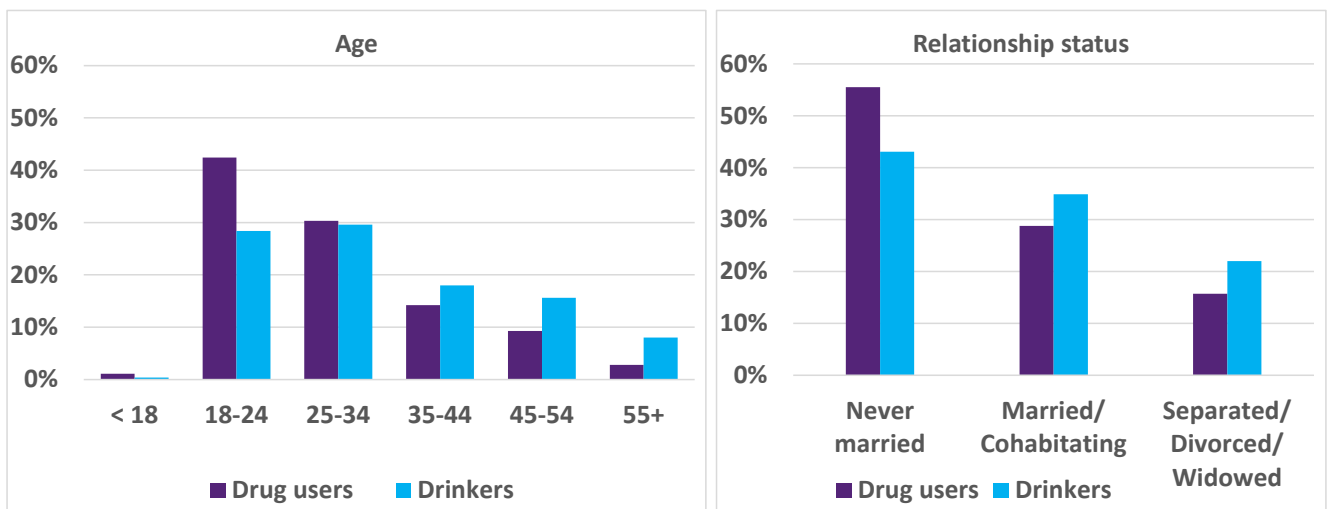
How do drug users differ from drinkers in terms of demographics and reason for arrest?
Drug users and drinkers did not differ on race/ethnicity. However, they did differ on several other demographic variables.
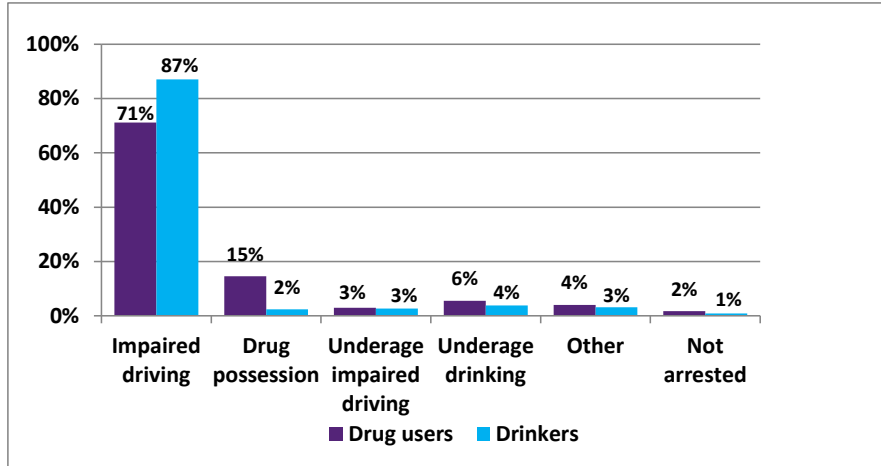
Compared to drinkers, drug users were:
- more often younger (*p* < .001, Figure 3, left side)
- less likely to have been married (*p* < .001, Figure 3, right side)
- less likely to have an advanced degree (8% vs. 16% reported having a bachelor's or graduate degree; *p* < .001, not shown)

Figure 3. Age and Relationship Status

The majority of both groups reported being arrested for impaired driving, though the percentage was slightly lower for drug users than for drinkers. Additionally, a higher proportion of drug users than drinkers reported that their arrest was for drug possession ($p < .001$, Figure 4).

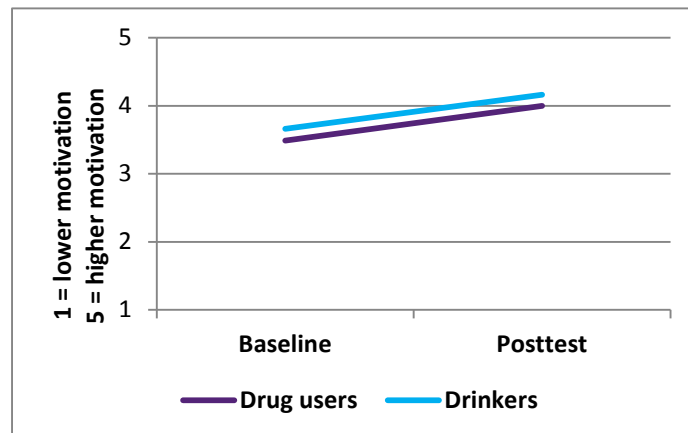**Figure 4. Reason for arrest**

Before receiving PFL, how do drug users differ from drinkers on outcomes targeted by the program? Do drug users then experience more or less benefit than drinkers?
Before PFL, drug users were similar to drinkers on several variables. On other variables, the groups differed slightly before PFL. In all of these cases, drug users started with "worse" scores (i.e., scores that were indicative of higher risk) than drinkers. In these circumstances, two patterns emerged. In the first, drug users experienced the same amount of improvement from PFL as drinkers. In the second pattern, drug users experienced *more* benefit than drinkers such that, by posttest, they had "caught up" with and were no longer exhibiting higher-risk cognitions and intended behaviors than drinkers.
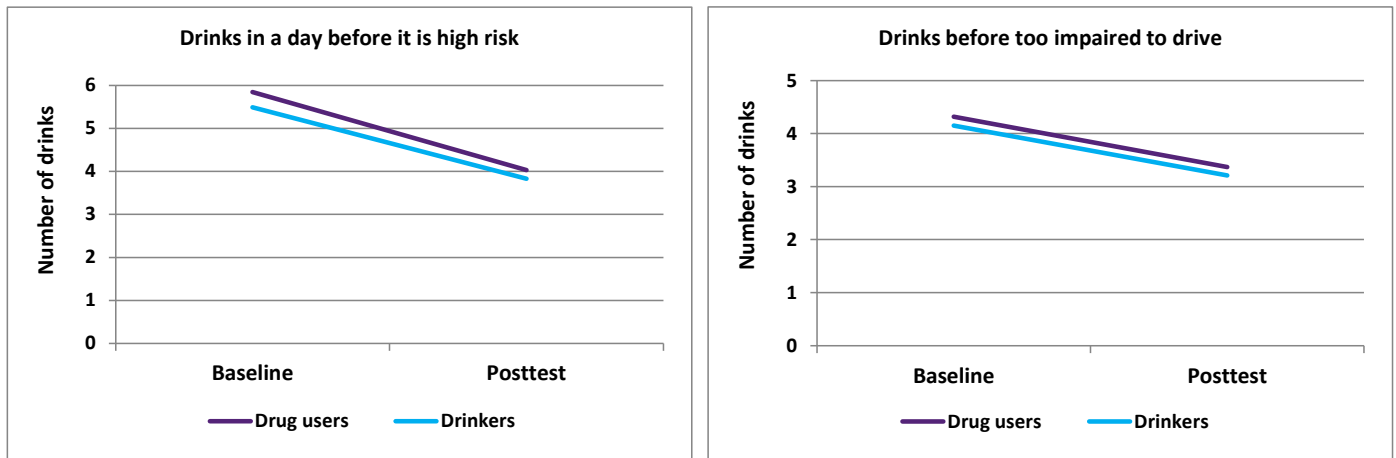
Motivation: Drugs users had slightly lower motivation for low-risk drinking at baseline, but showed the same amount of improvement as drinkers (Figure 5).

Figure 5. Motivation to decrease/maintain drinking to/at low-risk levels
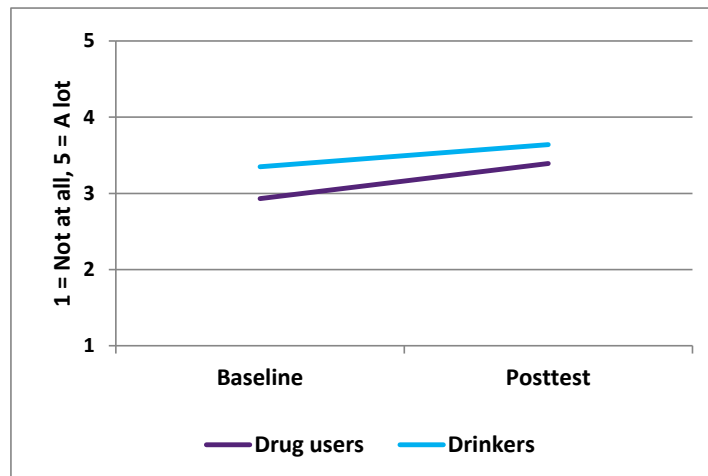
Risk perceptions: Drug users showed slightly worse baseline scores on the number of drinks in a day that they perceived as high risk but showed as much improvement as drinkers (Figure 6, left side). In terms of their ratings of the number of drinks they could have before they were too impaired to drive, drug users and drinkers were similar at baseline and in the amount of change they showed (Figure 6, right side).

Figure 6. Number of drinks before it is high risk and before too impaired to drive

When rating how much their substance use risked things they value, drug users scored lower at baseline, but greater improvement from baseline to posttest (Figure 7).

Figure 7. Perceived risk to valued things if continue prior substance use choices

Past behavior compared to future intentions: Drug users and drinkers did not differ in their number of usual drinks per drinking day in the 90 days prior to PFL, nor did they differ in terms of the amount of improvement evidenced by their intentions for typical drinking post-PFL (Figure 8, left side). Compared to drinkers, drug users did report a greater maximum number of drinks before attending PFL (Figure 8, right side) and being more likely to have driven under the influence (Figure 9). However, when looking at their future intentions, drug users showed at least as much improvement as drinkers and, in fact, did not significantly differ regarding the percent intending to drive impaired after PFL.
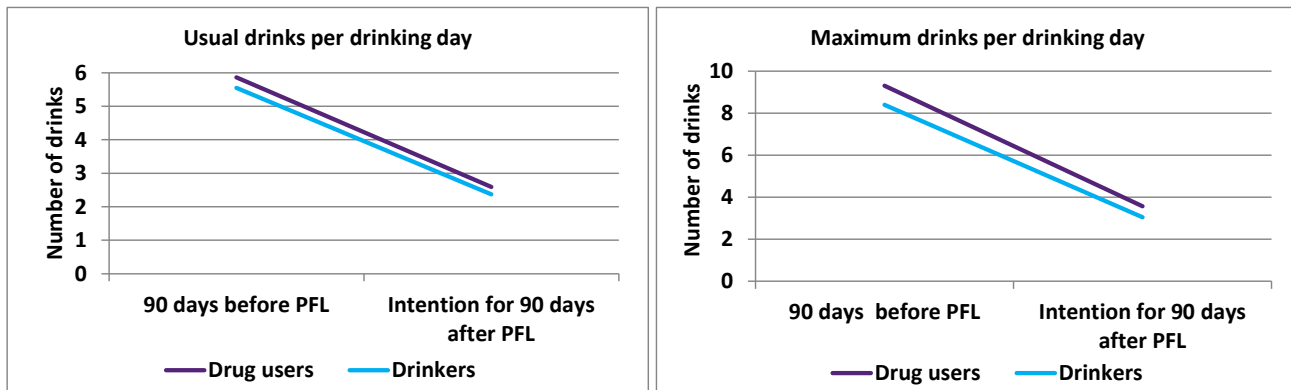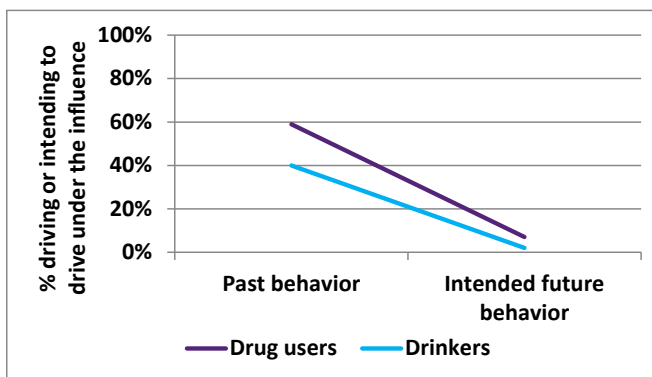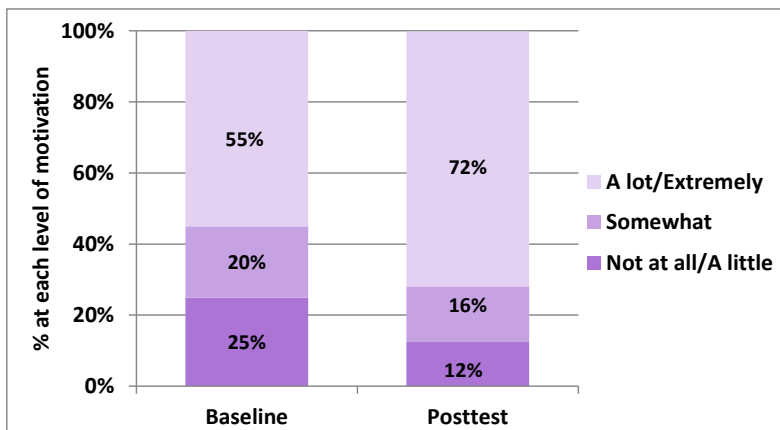
Figure 8. Past behavior vs. future intentions

Usual drinks per drinking day

Number of drinks (y-axis: 0–6)

x-axis: 90 days before PFL, Intention for 90 days after PFL

—— Drug users —— Drinkers

Maximum drinks per drinking day

Number of drinks (y-axis: 0–10)

x-axis: 90 days before PFL, Intention for 90 days after PFL

—— Drug users —— Drinkers

Figure 9. Driving under the influence (past behavior vs. future intentions)

% driving or intending to drive under the influence (y-axis: 0%–100%)

x-axis: Past behavior, Intended future behavior

—— Drug users —— Drinkers

Did drug users improve over the course of PFL on variables specifically pertaining to drug use?
Yes. Although by definition 100% of the drug user subsample had been using drugs prior to PFL, the percentage intending to continue their use after PFL was 37.8% ($p < .001$, not shown). Additionally, drug users significantly improved in their motivation to reduce drug use to low-risk levels (i.e., abstinence; $p < .001$). Figure 10 shows the percentage of drug users scoring at each level of motivation at baseline and posttest.

Figure 10. Motivation to reduce drug use to low-risk levels

% at each level of motivation (y-axis: 0%–100%)

Baseline: A lot/Extremely 55%, Somewhat 20%, Not at all/A little 25%

Posttest: A lot/Extremely 72%, Somewhat 16%, Not at all/A little 12%

Legend: A lot/Extremely, Somewhat, Not at all/A little

Do drug users view PFL as helpful?

Yes. Drug users reported positive reactions to PFL: over 80% agreed that PFL helped them in different ways (Figure 11). On certain items, drug users were slightly less likely than drinkers to agree that PFL helped them. While these differences are statistically significant, they are quite small and therefore may not be practically meaningful.

Figure 11. Participant perceptions of PFL's helpfulness

* Asterisk denotes statistically significant difference ($p < .005$)

Conclusions & Future Directions

Prevention Research Institute (PRI) is often asked about the effectiveness of Prime For Life (PFL) for individuals who use drugs, so we analyzed data from program participants across 10 states. We found that fewer people report using drugs compared to only drinking alcohol (23.7% versus 61.6%, respectively). The vast majority of drug users also drink alcohol. We also found that drug users benefit from PFL. Specifically, they show improvements from before to after PFL that are as large as or larger than those of drinkers.

It is not surprising that more PFL participants report alcohol use than drug use given that most come to PFL due to impaired driving arrests, and alcohol is usually the impairing substance in such arrests. However, as law enforcement systems develop better methods for detecting drug-impaired driving, we anticipate there will be increases in the number of program participants who use drugs.

Finally, it should be noted that the questionnaires did not ask detailed information about participants' drug(s) of choice. Hence, we unfortunately were not able to distinguish between different types of drugs participants used (e.g., marijuana vs. cocaine vs. prescription medications). In future evaluations, we will be collecting more detailed data to potentially examine differences between participants using different classes of drugs.

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Appendix A

Drug Users Sub-Analyses

As previously noted, for our main analyses we examined differences between PFL participants who used drugs and those who only used alcohol. We made this decision to maximize statistical power and also because the vast majority of drug users (78.2%) were drinking in high-risk amounts. However, we recognize that in choosing to categorize participants in this way, we may have obscured potential differences between drug users who drank in high-risk amounts ("HR drinkers") and drug users who either did not drink or only drank in low-risk amounts ("LR drinkers/alcohol abstainers"). As such, we conducted a set of secondary, exploratory analyses to examine possible differences between these two subgroups of drug users.

We found that among drug users for whom we also had data on drinking levels (n = 1,045), LR drinkers/alcohol abstainers (n = 228) differed from HR drinkers (n = 817) on several demographic variables. In particular, relative to HR drinkers, LR drinkers/alcohol abstainers tended to be older, identify as African American/Black, have less education, and currently or previously be married or partnered; they were also more likely have been arrested for drug possession (all p values < .005).

Despite these demographic differences between the subgroups of drug users, they did not typically differ on relevant outcome variables. Specifically, there were no significant baseline differences between LR drinkers/alcohol abstainers and HR drinkers on motivation to keep drinking to LR levels, motivation to keep drug use to LR levels, or perceived risk to valued things if continuing prior substance use choices. Likewise, there were no differences between LR drinkers/alcohol abstainers and HR drinkers in terms of the amount of change experienced on these variables. At posttest, the subgroups of drug users did not differ with regard to the proportion of participants intending to abstain from drugs, nor the extent to which they perceived PFL as helpful.

One exception to the lack of difference on outcome variables between drug user subgroups did occur. There were significant baseline differences on the proportion reporting impaired driving in the 90 days prior to PFL (p < .005). Specifically, 62.2% of drug users drinking at HR levels reported driving impaired during the 90 days before PFL, compared to only 44.4% of drug users either drinking at LR levels or abstaining from alcohol. However, there was no significant difference between subgroups in the amount of program benefit they experienced on this variable (past behavior vs. future intentions).