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# The effect of depression on alcohol use among female heavy drinkers who underwent HIV prevention intervention

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ABSTRACT

**Objective:** This study examined the impact of baseline depression on alcohol use among heavy drinking women.

**Sample:** For the present analysis, 348 women who were enrolled in the Sister to Sister (STS) study to explore the response of the female heavy drinkers to a peer-delivered group HIV prevention intervention compared to a standard intervention for reducing HIV risk behaviors were included.

**Findings:** 32% of female heavy drinkers had Major Depression within the past 12 months. African American heavy drinking women were less likely to have depression compared to non-African American women. Heavy drinking women who had past year depression usually reported having family members with depression. There were no significant differences in mean usual number of drinks each week and number of abstainers among depressed and non-depressed female heavy drinkers regardless of different types of prevention interventions.

**Conclusion:** Depression had no significant impact on alcohol use among female heavy drinkers who underwent HIV prevention intervention. With high rate of depression, development of prevention program that also emphasize on detection and preventing depression in this population are also important.

MATERIALS AND METHODS

**Data** were derived from the NIAAA-funded Sister-to-Sister (STS) study, an intervention to reduce high risk behaviors among female heavy drinkers not currently in treatment.

**Eligibility criteria:** Female, 18 to 44 years of age, sexually active 4 months prior to the interview, HIV negative, scoring at least 4 on the modified AUDIT, and urine negative for cocaine, heroin, and amphetamine use.

**Study protocol:** Participants were randomly assigned into 2 groups. Women in group A, the Standard Intervention (SI), received only HIV counseling. Women in group B, the Enhanced Intervention (EI), had to attend 4 peer-delivered educational group sessions.

**Measures:** All information for the present analysis was obtained from the Washington University Risk Behavior Assessment (WU-RBA), Partial Substance Abuse Model (SAM), Family History Screener (FHS), and Partial Diagnostic Interview Schedule (DIS).

**Past year depression:** Fulfilled the criteria for the DSM-IV diagnosis of Major Depressive Disorder in the past 12 months at baseline.

**Usual number of drinks each week:** Calculated from usual number of drinks each week in the past 12 months at baseline and at 12 months. At 4 months, derived from usual number of drinks each week in the past 4 months.

DEMOGRAPHIC DATA

All participants were female, mean age (N=348) was 32 years (SD=10), 75% African American, mean number of years of education was 11 years., 73% had at least one child, 58% reported having only one sex partner in the past 4 months, 30% had one or more new sex partner in the past 4 months, 23% had ever traded sex for drugs or alcohol, 44% had any alcoholic family members, 31% had any family members with drugs problems, 35% had family members with depression, mean usual number of drinks each week at baseline was 38 drinks per week, 111 women had fulfilled the DSM-IV Major Depression within 1 year prior to the study (32%). Thirty four people who had lifetime diagnosis of Major Depression without active period within 12 months before the study were excluded from further analysis (10%). Other 53 women who were not shown up either at 4 month or 12 month follow up were also excluded.

RESULTS

Table 1. Characteristics of heavy drinking women with and without past year depression at baseline

|                                                           | Past year depression (n=93) | No lifetime or past year depression (n=168) | p-value  |
|-----------------------------------------------------------|-----------------------------|---------------------------------------------|----------|
| Mean age                                                  | 34.09                       | 32.38                                       | 0.198    |
| <i>Ethnicity</i>                                          |                             |                                             |          |
| African American                                          | 68%                         | 86%                                         | 0.0006*  |
| Non-African American                                      | 32%                         | 14%                                         |          |
| <i>Education</i>                                          |                             |                                             |          |
| Mean number of years of education                         | 11.47                       | 11.27                                       | 0.487    |
| <i>Family History</i>                                     |                             |                                             |          |
| Had one or more child                                     | 76%                         | 73%                                         | 0.579    |
| Mean number of children                                   | 2.40                        | 2.28                                        | 0.692    |
| Alcohol                                                   | 51%                         | 45%                                         | 0.659    |
| Drugs problems                                            | 34%                         | 35%                                         | 0.832    |
| Depression                                                | 56%                         | 26%                                         | <0.0001* |
| <i>Sexual Risk Behavior</i>                               |                             |                                             |          |
| Had more than one sex partner in the past 4 months        | 29%                         | 33%                                         | 0.389    |
| Had one or more new sex partner in the past 4 months      | 29%                         | 31%                                         | 0.823    |
| Had ever traded sex for drugs or alcohol                  | 32%                         | 22%                                         | 0.103    |
| Did not always use condom during sex in the past 4 months | 73%                         | 74%                                         | 0.282    |

\*Statistically significant; p≤0.05

Acknowledgements

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Figure 1. Mean usual number of drinks each week by depression

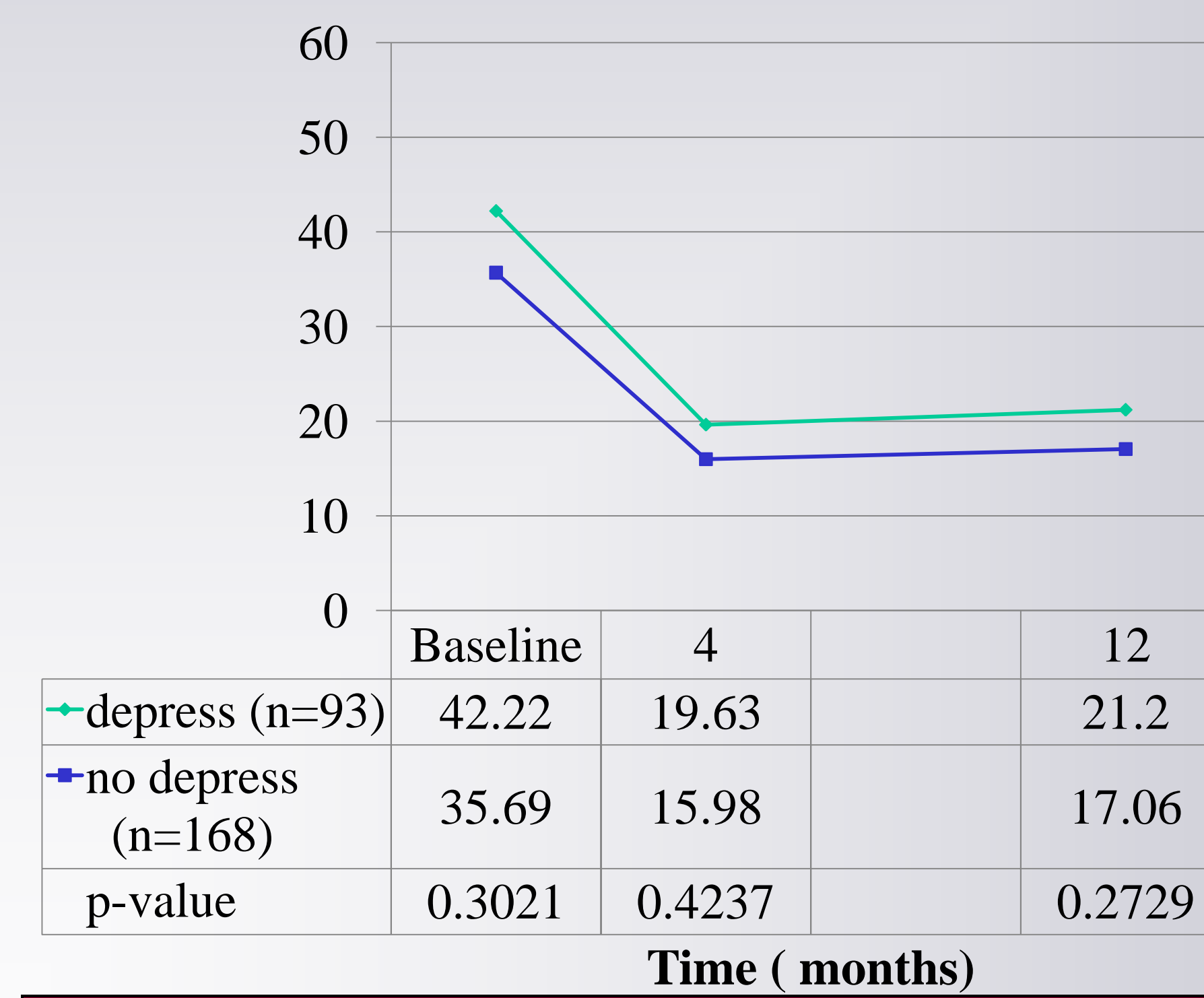


Figure 2. Percentage of abstainers by depression

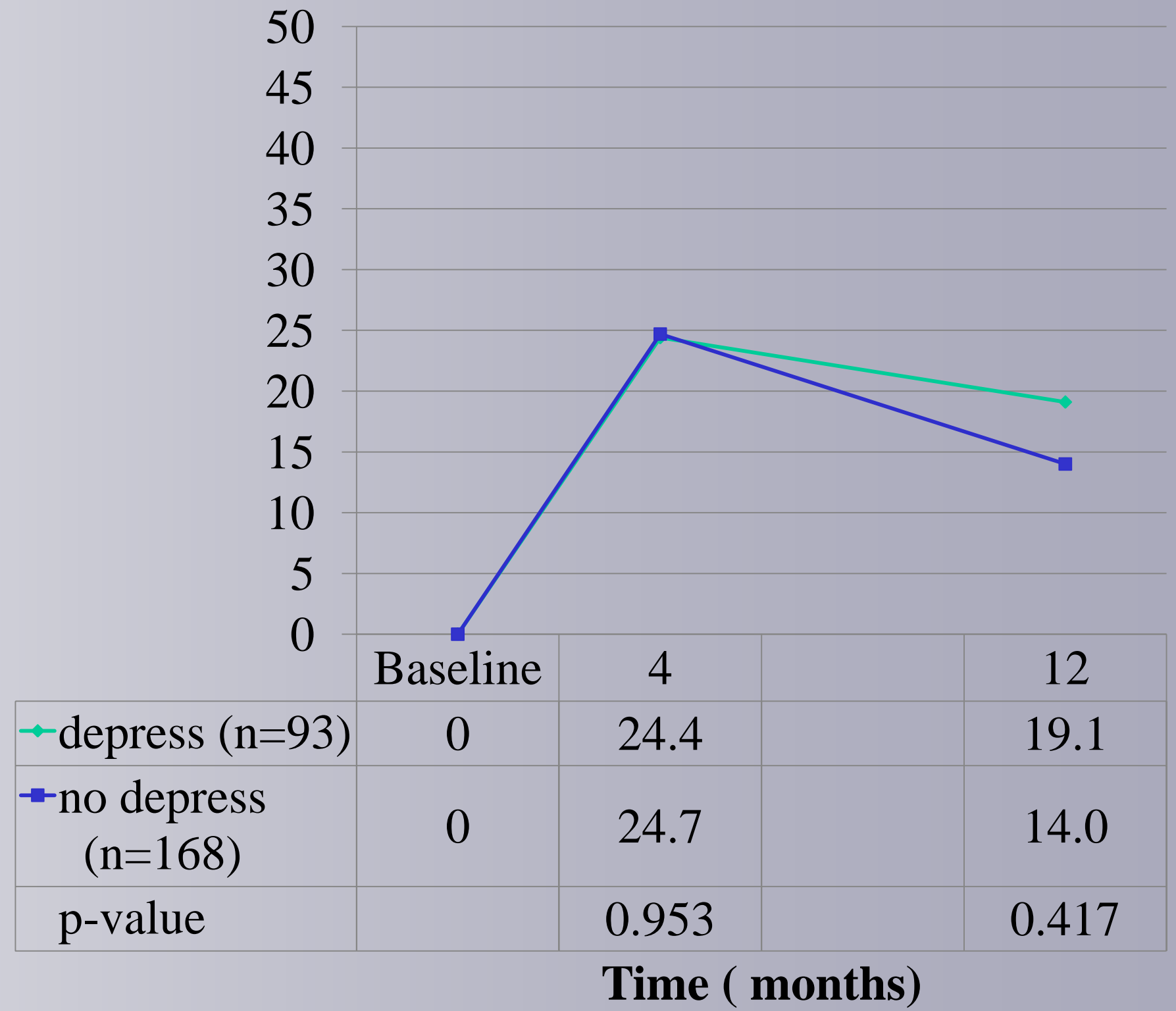


Figure 3. Mean usual number of drinks each week by intent-to-treat and depression

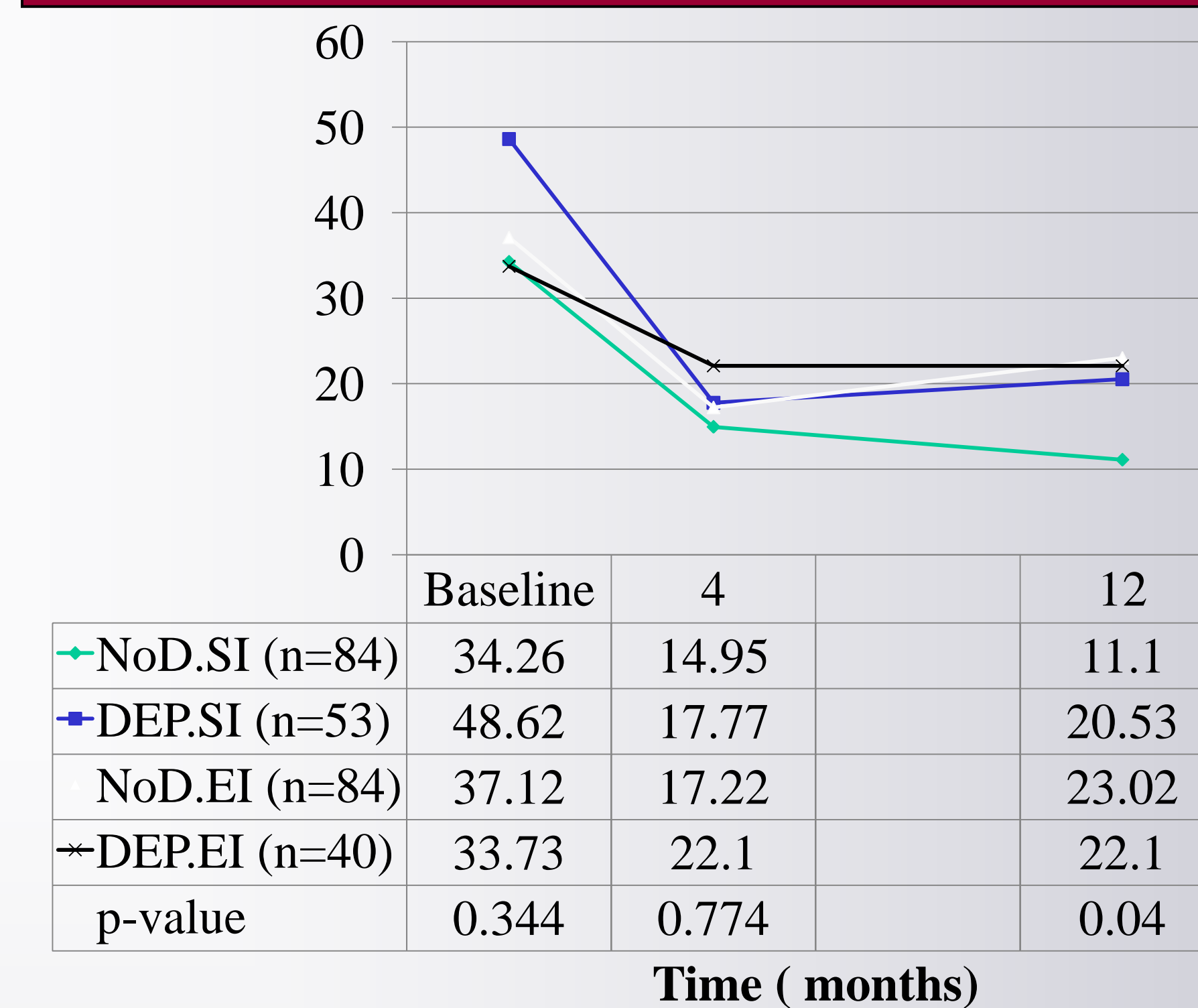


Figure 4. Percentage of abstainers by depression

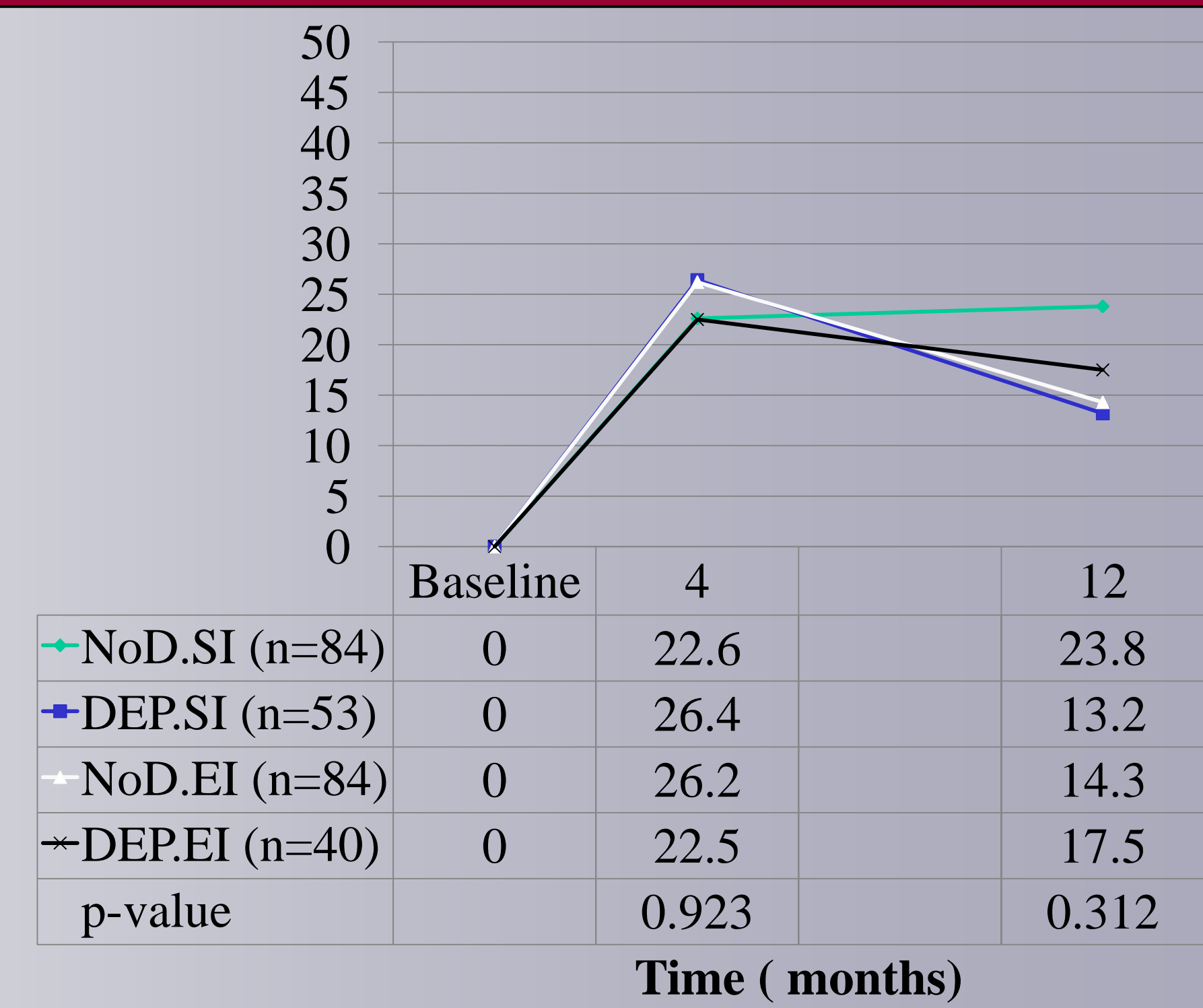


Figure 5. Mean usual number of drinks each week by EI completion and depression

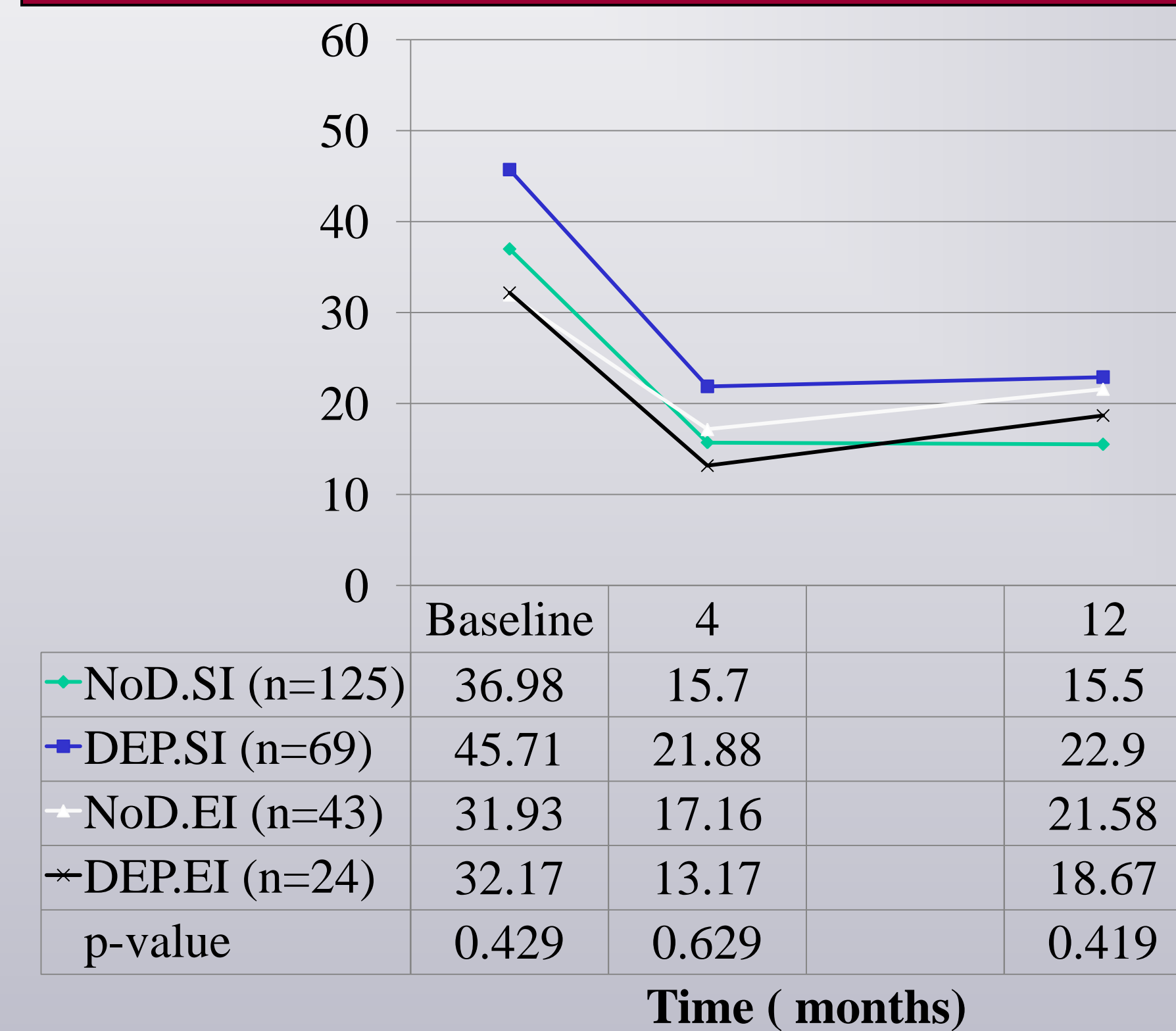
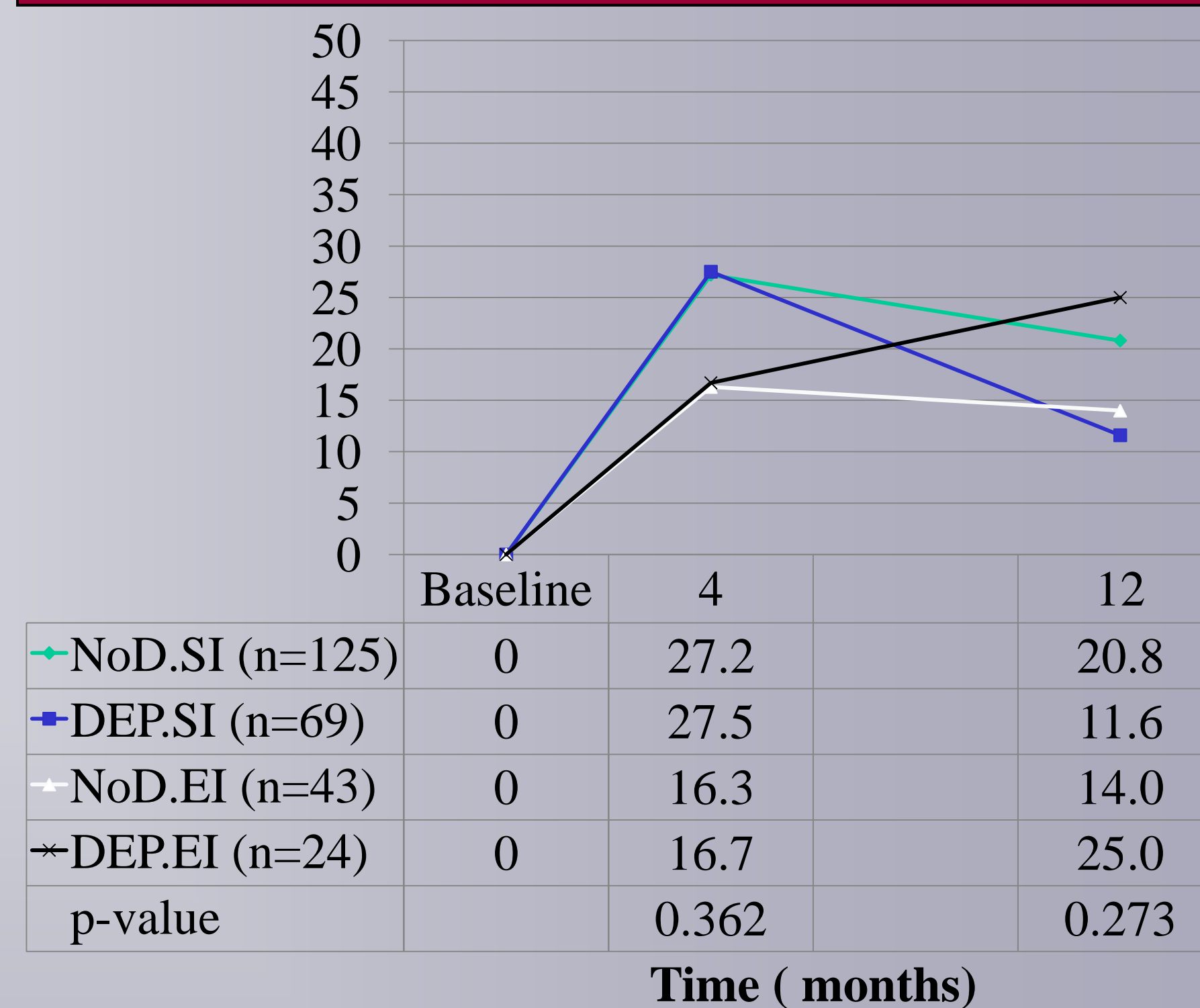


Figure 6. Percentage of abstainers by EI completion and depression



CONCLUSIONS

- Depression had no significant impact on alcohol use among female heavy drinkers who underwent HIV prevention interventions. With this finding, there will be no need to exclude alcoholic people with depression from studies of the treatment and prevention program for alcohol.
- With high rate of depression among female heavy drinkers, further development of interventions in this population should also emphasize on detection and prevention of co-morbid depression.