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## Background

For patients with opioid use disorder (OUD), retention in medication treatment improves abstinence rates and reduces the risk of early mortality (1, 2). OUD patients frequently experience symptoms of depression (3) and chronic pain (4), both of which are risk factors for opioid relapse (5). The present study explores how depression and chronic pain impact treatment retention, engagement and opioid use.

## Methods

We recruited OUD patients receiving medication treatment at the University of Maryland Addiction Treatment Center in West Baltimore ( $n=50$ ).

Assessments:

- Patient Health Questionnaire (PHQ-9, total score)
  - Pain Numerical Rating Scale [PNRS, Item 1 = rating of average pain over the past week on a scale from 0 (none) to 10 (severe)]
  - Pain Catastrophizing Scale (PCS, total score)
- A retrospective chart review was conducted 90 days after the date of consent to document three outcomes:
- Treatment retention, defined as documentation of continued medication dosing within two weeks of the 90-day date (yes or no)
  - Opioid use, defined as a positive urinalysis test within two weeks of the 90-day date (yes or no)
  - Continued engagement in care, a continuous variable representing a count of clinic-administered and take-home doses (more doses = better engagement)

	Frequency	Percent
<b>Gender</b>		
Male	32	64%
Female	18	36%
<b>Race</b>		
Black	30	60%
White	16	32%
Other	4	8%
<b>Age</b>		
18-49	23	46%
50+	26	52%
<b>Level of Education</b>		
Less than HS	14	28%
HS/GED	24	48%
College	12	24%
<b>Most Recent Route of Use</b>		
Insufflation	38	76%
Intravenous	10	20%
Oral	1	2%
Smoke	1	2%
<b>Discharged Before 90 Days</b>		
Yes	15	30%
No	35	70%
<b>Reason for Discharge</b>		<b>Patients (n = 15)</b>
Lost to Follow-Up	11	73%
Transfer	4	27%

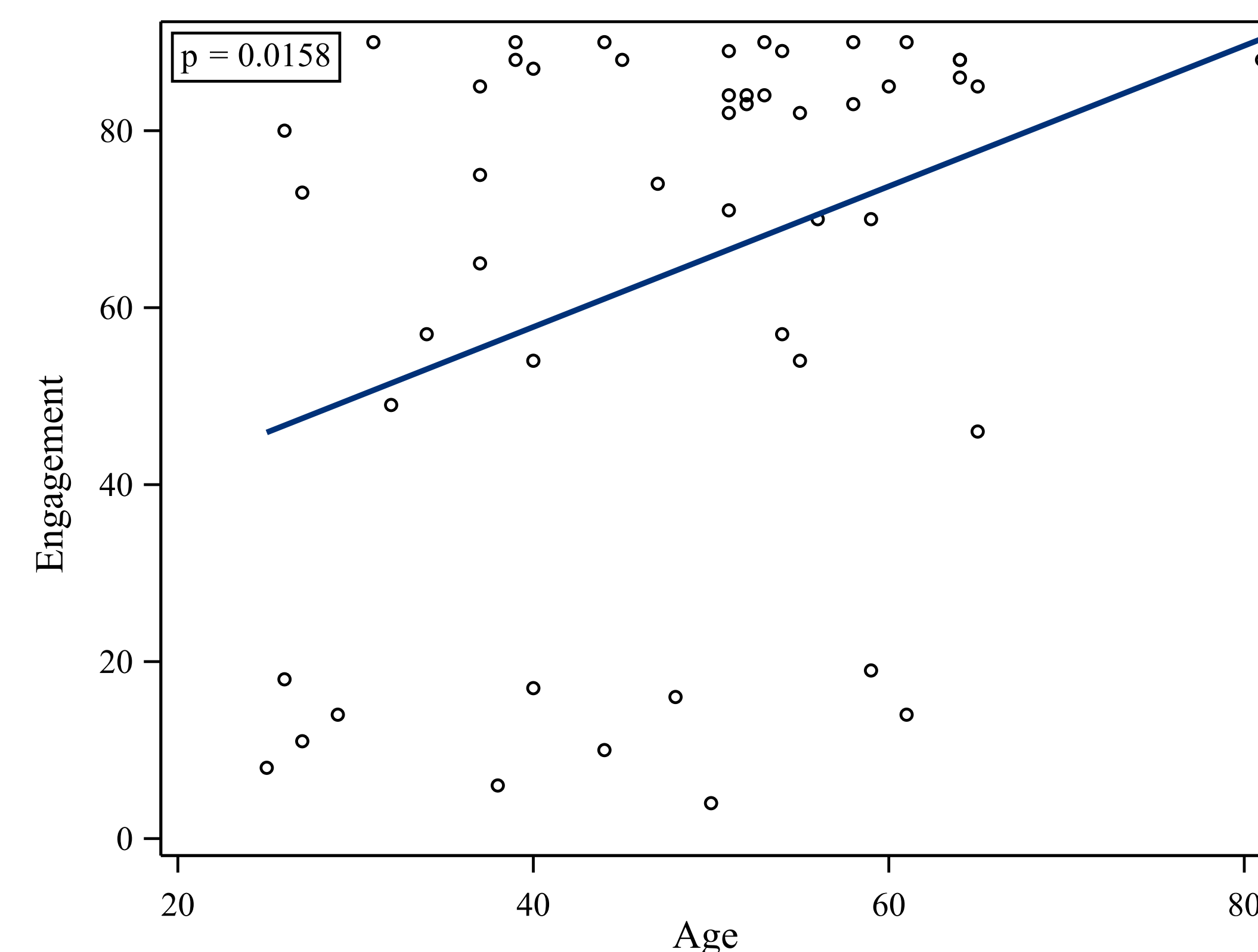


Figure 1. Older age was positively associated with 90-day treatment engagement ( $p=0.02$ )

Screening Measures	PHQ-9 (0-27)	PNRS Item 1 (0-11) (n = 49)	PCS (0-52)
<b>Mean Score (+SD)</b>	9.86 (+12.82)	4.65 (+2.90)	19.76 (+15.53)

We thank the medical and administrative staff at the University of Maryland Addiction Treatment Center for their support, as well as Lan Li for her work on data coding and analysis. This project is supported by the National Institute of Drug Abuse (NIDA) funding mechanism: #R24DA051975. (PI: Bennett)

## Results

- The sample was 64% male and 60% African American with a mean age of 47.78 (SD=12.82).
- Participants reported an average of 4.76 (SD=3.24) lifetime treatment episodes for heroin/fentanyl/opioid use.
- Participants reported a moderate level of depressive symptoms (6).
- Male participants scored lower on the PHQ-9 ( $r = -0.41, p < .01$ ).
- Participants reported a moderate level of current pain (7).
- Scores on the PCS ranged from 0-52 with a mean of 19.76, with a clinically relevant score being  $\geq 30$  (SD=15.53) (8).
- No relationships were found between PHQ-9 scores and 90-day outcomes, PNRS scores and 90-day outcomes, or PCS scores and 90-day outcomes.
- Results from the logistic regression showed that greater age predicts better engagement, and higher PHQ-9 scores predict a greater likelihood of illicit opioid use during treatment.

	Frequency	Percent
<b>Retention</b>		
Yes	32	64%
No	18	36%
<b>Opioid Use</b>		
Yes	24	80%
No	6	20%
<b>Engagement</b>		
4-49	13	26%
50-90	37	74%

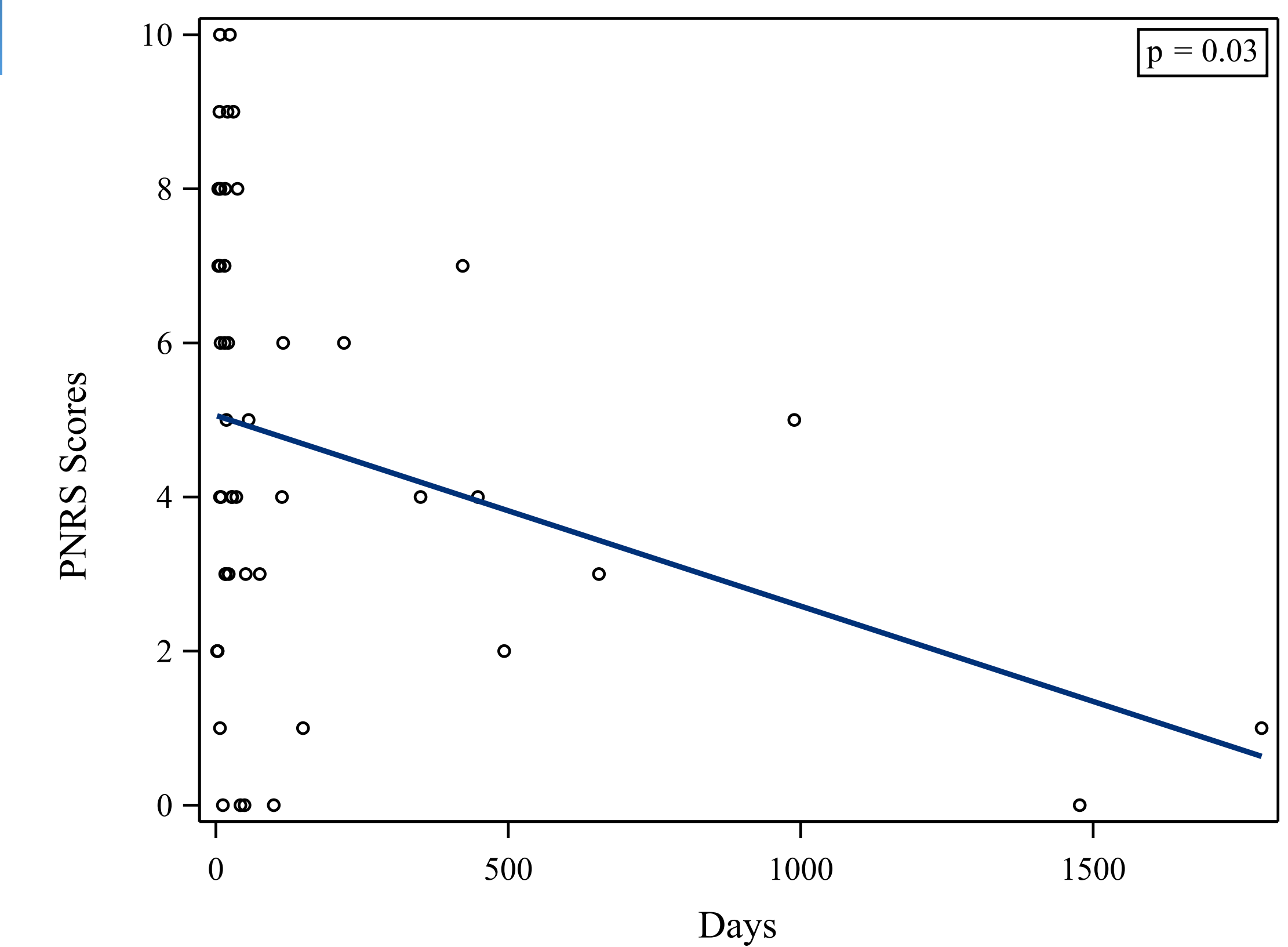


Figure 2. There was a negative relationship between days in treatment before study enrollment and weekly pain (NRS,  $r = -.31, p = .03$ )

## Discussion

Depression symptoms, current pain, and worry about pain are common in OUD patients. We did not find these variables to be related to 90-day retention, opioid use, and engagement in treatment as they were defined in this study. In addition, the sample size for opioid use at 90 days was small ( $N = 30$ ). Our findings do suggest that depression symptoms and current pain are common enough in OUD patients and would benefit if OUD treatment programs addressed them over the course of care.

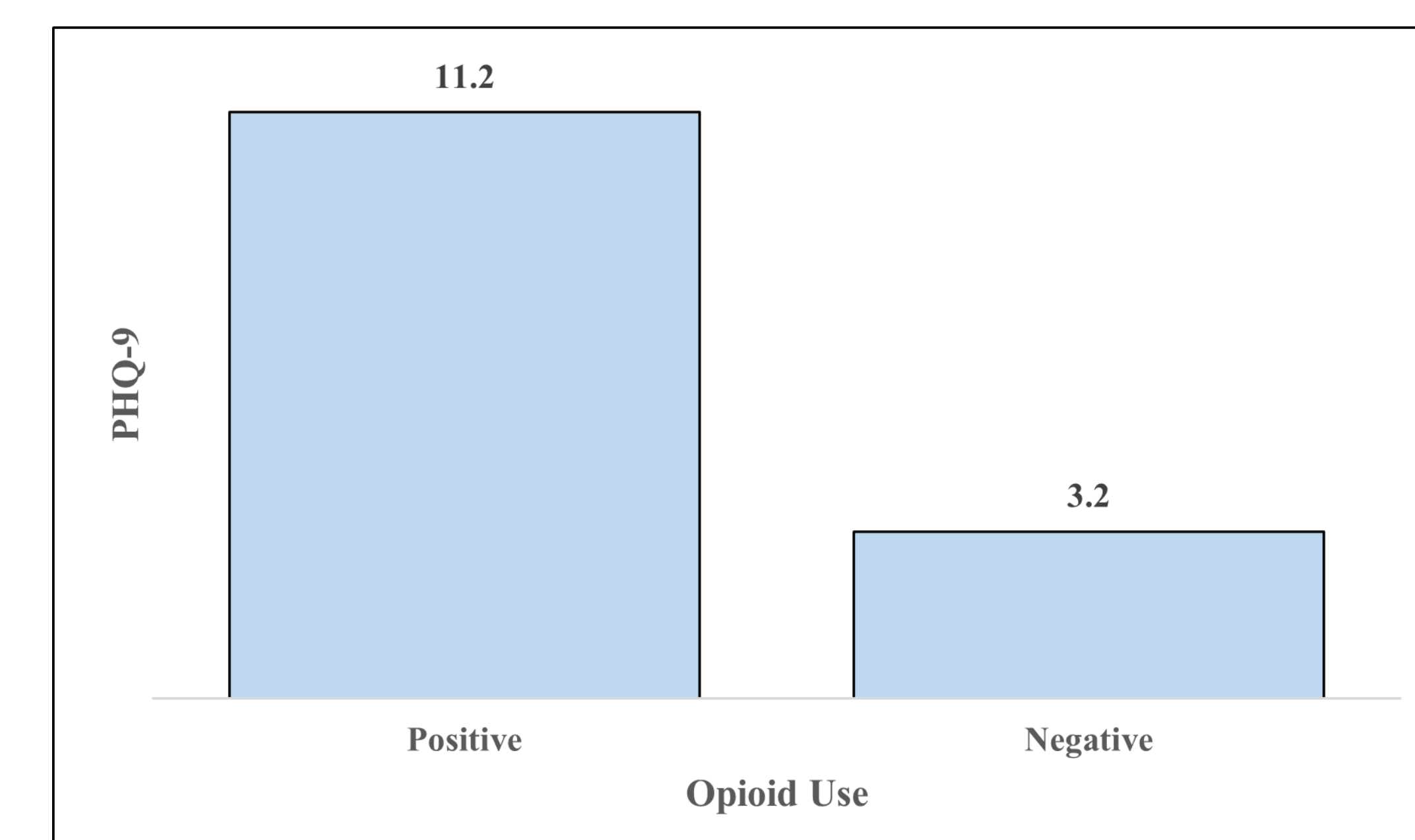


Figure 3. Depression was associated with testing positive for non-prescription opioids at 90 days ( $z = -2.19, p = .03$ ).

## Citations

