



Predictors of Drug Relapse and Clinical Improvements in Chronic Pain Patients After a Pain Rehabilitation Program: A Retrospective Review.

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BACKGROUND

- The Pain Rehabilitation Clinic (PRC) program employs a multidisciplinary team approach to provide an alternative treatment for chronic pain and other chronic conditions.
- This 3-week intensive program offers a comprehensive management plan combining cognitive behavioral therapy, physical therapy, and behavioral interventions to manage chronic pain, improve function and quality of life while providing strategies to reduce medication consumption and dependence.

METHODS

- Retrospective chart review of 290 records from tertiary hospital PRC (Jan-Dec 2022).
- 143 records analyzed for controlled substance relapse.
- Outcomes measured:
 - Multidimensional Pain Inventory (MPI).
 - 36-Item Short-Form Health Status Survey (SF-36).
 - Center for Epidemiological Studies Depression Scale (CES-D).
 - Pain Catastrophizing Scale (PCS).
 - Pain Self-Efficacy Questionnaire (PSEQ).
 - Pain Anxiety Symptom Scale (PASS).

METHODS

- Pre-PRC controlled substance use examined.
- Relapse: prescription refill >31 days post-program within 1 year.
- Analysis: descriptive statistics, correlation analysis. We used R studio.
- IRB exempt (ID: 22-007962).

TABLE 1. Demographic characteristics

Age	47.62 ± 16.50
Gender	
Female	211 (72.76)
Ethnicity	
Asian	5 (1.7)
Caucasian	248 (58.5)
Black or African American	19 (6.6)
Other	17 (5.9)
Years on pain	9.90 ± 10.01
Data expressed as n (%) and mean ± SD.	

RESULTS

- Opioid use pre-PRC strongly predicted relapse (OR=15.44, 95% CI [3.76, 63.45], p<0.0001).
- Relapse rates by substance (Table 3).

TABLE 2. Questionnaires outcomes

	Admission	Discharge	p value	% improvement
SF-36				
Physical Functioning	45.64 ± 25.34	64.86 ± 23.89	<0.001	42%
General Health	43.79±21.15	59.01±20.80	<0.001	35%
MPI				
Perceived control	3.15±1.26	4.53±1.2	<0.001	44%
Interference of pain	4.08±1.05	2.80±4.46	<0.001	31%
PCS	24.34±12.47	14.27±11.44	<0.001	41%
PASS	44.6±19.83	27.21±19.94	<0.001	39%
PSEQ	28.08±13.48	46.29±12.80	<0.001	65%
CESD	24.33±12.65	12.41±10.56	<0.001	49%

Data expressed as mean ± SD.

RESULTS

- Correlations with relapse:
 - Higher SF-36 physical functioning scores: lower opioid relapse (r=-0.35).
 - Higher MPI-Pain interference: higher opioid relapse (r=0.352).
 - Higher SF-36 physical component: lower benzodiazepine relapse (r=-0.290).
- Significant improvements (p<0.001) in function, pain, depression, and anxiety surveys from admission to discharge.
- Opioid relapse patients at discharge showed:
 - Lower SF-36 Physical Functioning scores: 43.75 ± 25.04 vs. 64.44 ± 28.43 (p = 0.029).
 - Higher MPI Interference scores: 4.17 ± 0.67 vs. 3.06 ± 1.73 (p = 0.027).

TABLE 3. Relapse rates

Controlled substance type	Pre-PRC Use	Total	Relapse (%)
Opioids	Yes	27	8 (29.6)
	No	113	3 (2.65)
Benzodiazepines	Yes	39	15 (38.5)
	No	101	2 (1.98)
Stimulants	Yes	12	7 (58.3)
	No	128	4 (3.12)
Hypnotics	Yes	21	3 (14.3)
	No	119	1 (0.84)

DISCUSSION/CONCLUSION

- PRC effectiveness:
 - Significant improvements in function, pain, depression, and anxiety surveys.
- Relapse patterns:
 - Highest in stimulants (58.3%), potentially due to non-pain-related indications.
 - Moderate rates for opioids (29.6%) and benzodiazepines (38.5%), interpretation limited by small sample sizes.
- Key correlations:
 - Higher functional scores associated with lower relapse risk.
 - Highlights the importance of functional improvement in substance use prevention.
- Limitations:
 - Small cohort sizes, particularly for opioids (n=27) and benzodiazepines (n=39).
 - Limits generalizability and statistical power.
- Clinical implications:
 - Functional assessment may be crucial in predicting and preventing relapse.
 - Multidisciplinary PRC shows promise for managing chronic pain and reducing substance use relapse.

REFERENCES

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