

Impact of an Inpatient Psychiatric Exercise Program on Patient-Perceived Anxiety, Falls, Violent Events and Patient Satisfaction Scores



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INTRODUCTION

On a 38-bed psychiatric unit, preventing falls has been a constant concern for the staff. Historically, no available benchmark for psychiatric fall rates existed, and this unit's fall rate exceeded internal benchmarks when compared to other units. Patients receiving inpatient psychiatric care are encouraged to ambulate and socialize with their peers. This allows them to increase their mobility, build confidence, and interact with peers in a therapeutic milieu. Literature related to the effect of exercise on patient-perceived anxiety, patient satisfaction scores and violent events was limited in the acute care setting. Evidence did show exercise is an effective strategy for reducing fall-related injuries in older adults¹.



PURPOSE: To implement an exercise program that would provide improved psychiatric patient outcomes through exercise/stress reduction groups. The study's aims were to positively impact the following outcomes: fall rates, violent events, patient-perceived anxiety and patient satisfaction.

1. Oliver D, Healey F, Haines TP. Preventing falls and fall-related injuries in hospitals. *Clin Geriatr Med.* 2010. 26(4); 645-692. <http://dx.doi.org/10.1016/j.cger.2010.06.005>

METHODS

- Study Design
 - Quasi-experimental with post-test; nonequivalent, historical department comparison group (falls, violent events, pt. satisfaction)
 - IRB-approved, written informed consent obtained
- Inclusion Criteria
 - Psychiatric patients 18-64 years old
 - Licensed Independent Practitioner (LIP) activity consent
 - Appropriate per nursing judgment
 - All psychiatric diagnoses
 - Low and medium acuity status
 - Low or high fall risk
 - English- or Spanish-speaking
- Exclusion Criteria
 - Psychiatric patients <18 and >64 years old
 - Physical impairments requiring ambulatory aids
 - Pregnancy
 - Medical instability preventing LIP physical activity consent
 - High acuity status
 - New patients not assessed by LIP
 - Acute behavior or medical issues per nursing judgment
- Data Collection and Analysis
 - Patient-perceived anxiety measured via anonymous survey
 - Fall, patient satisfaction, and violent event data 6 months prior to implementation of exercise group vs. the 6-mo study period
 - Two-tailed, matched pair Student's *t* Test
 - Significance established at $p \leq .05$

INTERVENTION PROTOCOL & SAMPLE

EXERCISE GROUP PROGRAM

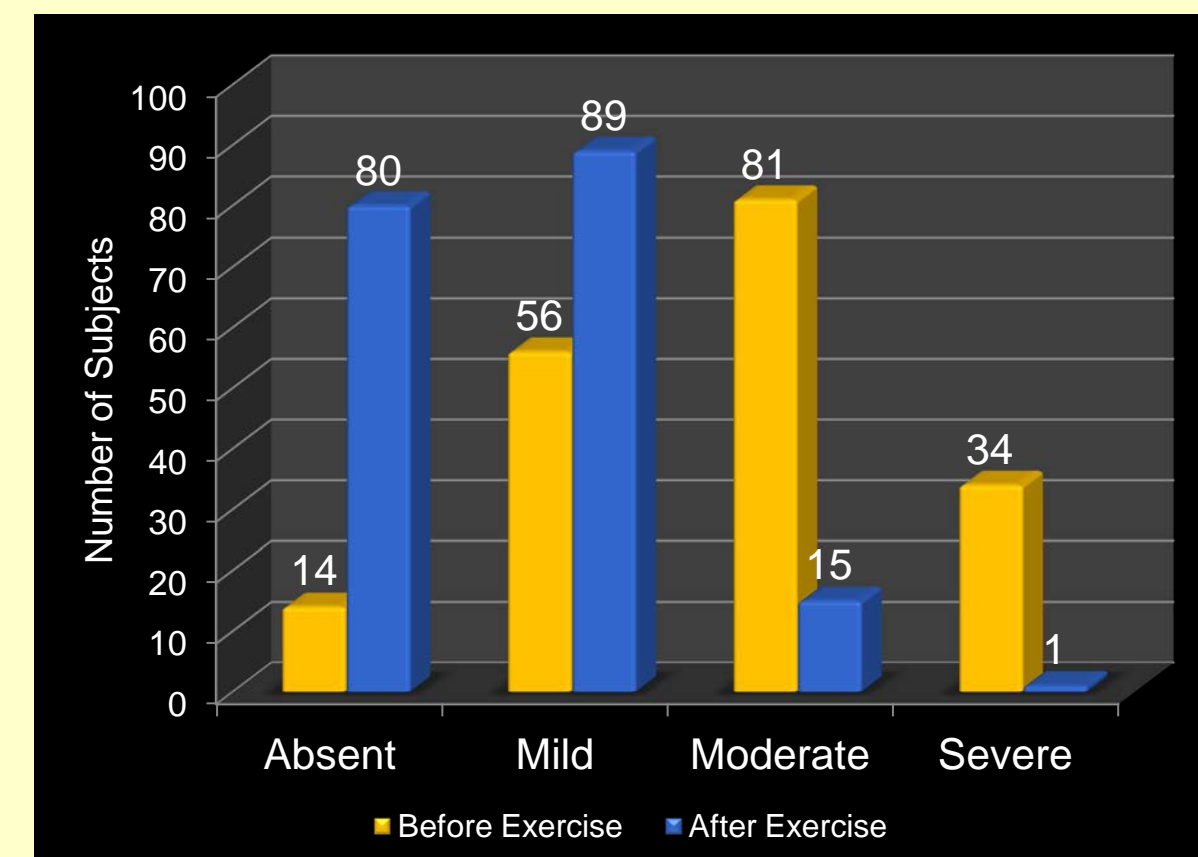
- Catawba Valley Medical Center's Director of Fitness Plus/ Sports Medicine oversaw development of exercise program and competency of nurses leading groups
- Nurse-led groups held twice weekly: Tuesdays/Thursdays
- Group program:
 - 5-minute warm up period
 - 20-minute activity period
 - 5-min cool down period
- Equipment:
 - 1 and 2 pound weights
 - Mini-ball
 - Stop watch
 - CD player & music CD



STUDY POPULATION

- Enrollment: 200 participants
- Exclusions: n=15
 - Reason: incomplete data
- Study Sample: N=185
 - Males: n=97
 - Females: n=88

SELF-REPORTED ANXIETY BEFORE & AFTER EXERCISE



- Before exercising, many more participants (n=115) self-reported moderate or severe anxiety compared to after exercise (n=16)
- After exercising, 2-fold more participants scored their anxiety as mild or absent (n=169) than prior to exercise group (n=70)
- Patient-perceived, mean anxiety was significantly lower after participating in exercise group ($t=17.05$; $df=184$; $p<.0001$)

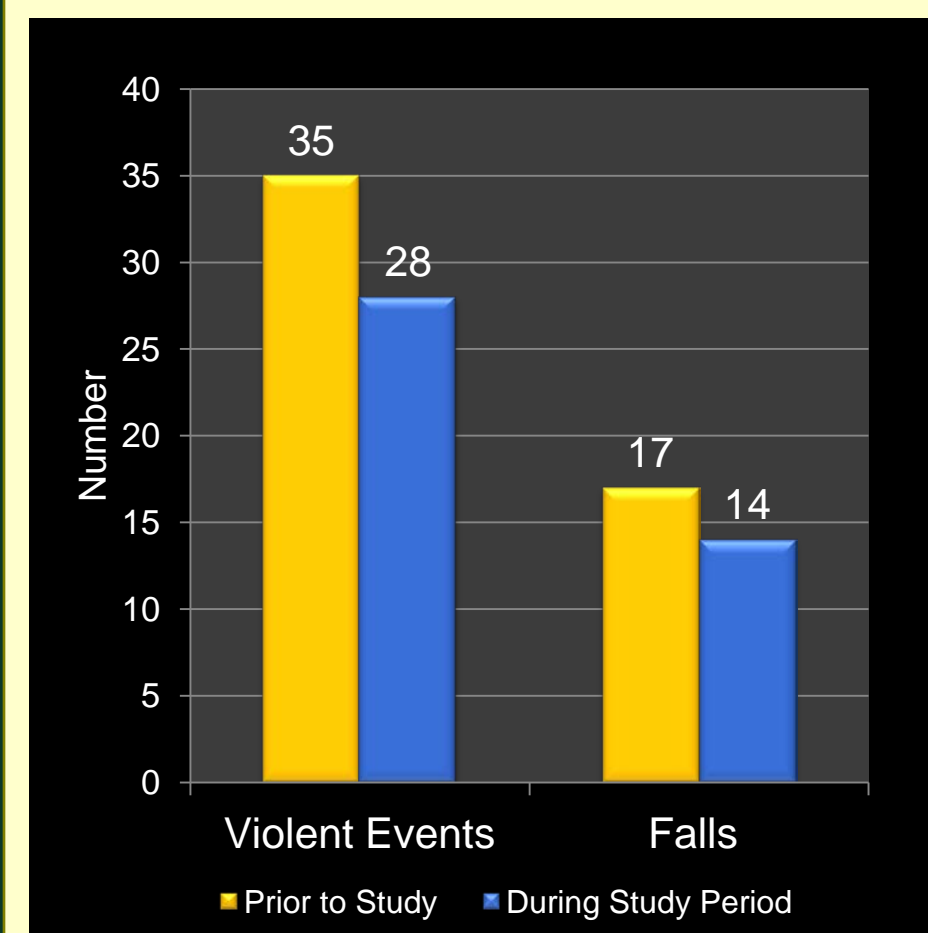
PARTICIPATE FEEDBACK

Helpfulness of Exercise & Intention to Continue Exercising					
Survey Question	Participant Age Categories (yr)				Total N=185
	18-29 n=61	30-39 n=48	40-49 n=44	50-64 n=32	
Did you find the group helpful? (n)	58	48	44	32	182
Will you continue with these exercises when discharged? (n)	51	45	42	27	165
Participants planning to continue exercise who found it helpful (%)	87.9	93.8	95.5	84.4	90.7

Thematic Analysis: Participant Comments n= 116

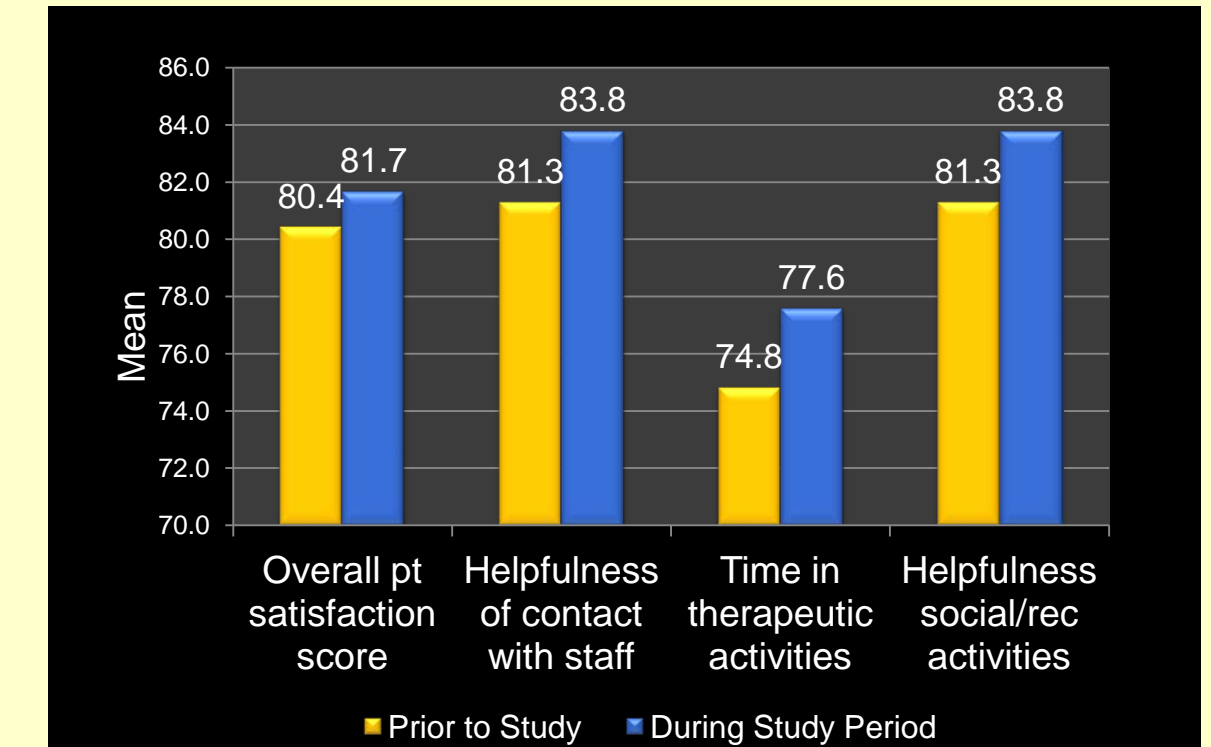


COMPARISON OF UNIT FALLS AND VIOLENT EVENTS



- Departmental violent events and patient falls decreased during the study interval
- These department-wide improvements were not mathematically significant

COMPARISON OF UNIT PATIENT SATISFACTION SCORES



- While all patient satisfaction scores improved, "Time in therapeutic activities" showed the greatest increase (2.8 points)

SUMMARY

- Conclusions
 - Observed significant decrease in mean patient-perceived anxiety after participating in group exercise
 - 75% participants' anxiety improved 1 or 2 levels
 - Over 90% of those who found exercise group helpful intend to exercise after discharge
 - Many commented the exercise was relaxing (41%)
 - All patient satisfaction indicators improved during study interval
- Implications
 - Findings support continuance of exercise groups
 - Research adds to body of knowledge supporting benefits of exercise
- Limitations
 - Single psychiatric department studied; results not generalizable to other patient populations/units
 - Exercise group sessions limited to 2 days/week
 - Patient-perceived anxiety measured via non-validated tool

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