

ORIGINAL ARTICLE

On importance of new group therapy for decrease of agitation during the critical period of nursing shift changes on an acute psychiatric inpatient floor

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ABSTRACT

Background: Agitation is a significant challenge to mental healthcare. This project aims to examine the effects of implementing an interactive mental flexibility group to decrease incidences of agitation in the inpatient psychiatric population during nursing shift change.

Methods: This observational study, conducted on the acute inpatient psychiatric unit of an academic hospital in Central NY, USA. This 23-bed unit admits psychiatric patients from the E.D. and local hospitals. The art-based interactive group was implemented during the critical period of nursing shift change, which is known for having an increased agitation due to caregiver changes. We tracked group attendance, incidences of agitation, and as-needed medication administration for agitation. We administered a Likert-type scale to rate emotions before and after each session.

Results: We observed a dramatic decrease in as needed medications for agitation 1 month prior to group (n = 576) compared to 3 months during group (n = 120). The new group constitutes a significant decrease in agitation incidents. Patients indicated an increase in happiness (mean = 0.46, *SD* = 0.978), decrease in sadness (mean = 0.44, *SD* = 1.078), and decrease in anger (mean = 1.15, *SD* = 1.984).

Conclusions: Our project indicates that the patients and staff well receive interactive group sessions in an acute psychiatric unit. The group sessions helped to decrease agitation and medication administration.

Future directions: We recommend the utilization of interactive mental flexibility groups on acute psychiatric units to promote emotional regulation, especially during nursing shift change.

Key Words: Inpatient psychiatry, Group therapy, Agitation, Art-based therapy

1. INTRODUCTION

Agitation, defined as “Excessive verbal and/or motor behavior that can be loud, disruptive, hostile, sarcastic, threatening, hyperactive, and/or combative”.^[1] A recent meta-analysis

of the prevalence of violence in acute inpatient psychiatric wards, with data from forty-two studies from high-income countries, reported a pooled prevalence of 18% reported acts with a 95% CI.^[2] Another meta-analysis published back in

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2015 found that 1 in 5 patients admitted to acute psychiatric units may commit violence.^[3] While this number looks significant, studies that have shown, staff tend to under-report the incidence of agitation and violence in the inpatient psychiatric setting.^[4-6]

A study surveyed data from 761 psychiatric hospital staff regarding their exposure to trauma, the incidence of PTSD, anxiety, and depression. Significant proportions of staff (16%-20%) met the criteria for probable PTSD, depression, and anxiety.^[7] Nurses also experience psychosocial impacts consisting of environmental safety, stigmatization of staff victim, unsupportive superiors.^[8] The prevalence of direct and indirect traumatic experience amongst patients in psychiatry setting is as high as 84.5%.^[9]

Many recent studies have focused on non-pharmacological interventions. Risk assessment strategies such as ward design,^[10] use of visual art,^[11] sensory modulation^[12] to decrease the incidence of agitation, many of these studies have favorable outcomes.^[13] Creative art-based therapies are newer modalities that are being researched and explored; studies done in the past have shown that art therapy helps improve emotional and psychological well-being with enhanced communication.^[14-17]

Increased agitation was noticed highest during nursing shift change. Medication times and mealtimes were also associated with an increased incidence of agitation.^[18,19] We decided to implement a novel form of art-based recreational therapy that focuses on completing creative questions and activities that encourage mental flexibility and imaginative thinking as a means to develop new coping skills, decrease the incidence of agitation, and improve mood amongst patients on an acute inpatient psychiatry unit. We implemented this new group called Neurons Away during the critical period of nursing shift change. Before Neurons Away, other groups were ongoing on the unit included movement and exercise, life skills, stress management, Yalom^[20] informed psychotherapy, artistic expression, peer support, medication information, and board games groups.

Neurons Away group sessions were designed to target inpatients low self-esteem and ineffective coping strategies by using integrative learning styles consisting of various activities, creative questions, and prompts that encourage cognitive flexibility by completing worksheets and activities with different questions. The group aimed to modify stress response from immature defenses of acting out to mature defense mechanisms of using humor, sublimation, altruism, and distraction as a way of new coping strategies to better emotional regulation. The hope was that patients could utilize these new strategies in their day to day interpersonal interactions

on the unit and after discharge from the hospital.

2. METHODS

This observational study was conducted as a quality improvement 3-month project on the acute inpatient psychiatry unit of an academic hospital. The unit is a 23-bed floor that admits acute psychiatric patients from the E.D., and local hospitals medical transfers. The average length of stay is five days. The facilitator, a contracted author and small-business owner with a focus on emotional well-being, visited the unit 5 times per week (Monday-Friday) at 4 p.m. for 1 to 1.5 hours per day. The interactive art-based group sessions were conducted on the unit in an open area where the maximum number of patients could participate. Thus, we had a large patient population. The sessions consisted of art-based exercises that promote new ways of thinking about a patient's existing difficulties in interpersonal interactions and emotional coping skills. The sessions were implemented at 4 pm during the critical period on the unit when day nurses change shifts with evening nurses. This period often has an increase in inpatient agitation due to caregiver changes.

During the five hours around group sessions, we tracked group attendance, the incidence of agitation, and administrations of as-needed medication for anxiety and agitation. A Likert-type scale, created for this project to capture the range of happiness, sadness, and anger. Each category offered emotions ranging from mild to intense that could be circled (see Figure 1).

The questions and tasks of the group vary in duration and mental stimulation. Playful and straightforward mental exercises are presented at the beginning of the group session as a warmup. Examples: *List ten and half of your favorite sounds. List all the unlikely toppings for a pizza. What can you put in an ice cream cone other than ice cream?* These are real and relatable prompts that redirect attention to non-threatening themes, creating a break in negative or intrusive thought patterns patients may be experiencing. After the patients have warmed up with these creative exercises, a new set of prompts are presented that require a more expanded sense of mental flexibility. Examples include: *What would life be like if humans lived underwater? Create five new kinds of vegetables and fruits. Describe the concept of refreshing.* These questions are presented on worksheets where patients can write their responses in addition to group conversations led by a facilitator. Group sessions typically end with personal development and self-reflection questions such as: *What kind of store would you open and invest your time in? What kind of new energy do you want to add in life? How do you get to know yourself?*

Neurons Away Group Project

Before workshop
 After workshop

Name _____ DOB _____ MR _____

Gender _____ Age _____ Date _____

This sheet is handed out twice. Once before the workshop & once after.
Please check mark the appropriate box at the top of the page.

Circle the emotions you feel right now:

HAPPY

Inspired
motivated
excited
overjoyed
thrilled
ecstatic
delighted

cheerful
up
good
glad
happy

pleased
fine
satisfied
content
mellow
alright

SAD

depressed
alone
hurt
dejected
hopeless
crushed
heartbroken

disappointed
upset
distressed
regretful
lost
stuck

unhappy
moody
down
sorry
bad
dissatisfied

ANGRY

10 - ENRAGED

9 - FURIOUS

8 - VERY ANGRY

7 - ANGRY

6 - FRUSTRATED

5 - ANNOYED

4 - IRRITATED

3 - OKAY

2 - CONTENT

1 - VERY HAPPY

What are you thinking about right now?

Figure 1. Emotions scale

Patient asked to circle their emotions on pre- and post-group sessions. Free text box was provided for any patients' comments

Due to the limiting nature of the inpatient setting (Short length of stay, open area group setting), consistent and consecutive attendance was hard to maintain. The format of the sessions was non-sequential, yet provided a variety of activities so that patients consistently participating had new material to work with.

The study was submitted to an Institutional Review Board (IRB), and it is determined that this project does not meet the definition of human subject research under the purview of

the IRB according to federal regulations. Therefore, it was a quality project with available data analysis and evaluation of it.

2.1 Statistical analysis

For each subject (Happy, Sad, Angry), varying identifier emotions were subcategorized into three groups: mild, moderate, and intense. Each emotion within each subcategory was assigned a numerical value; mild - 1 point, moderated - 2

points, intense – 3 points. The pre- and post-session emotion-scales were calculated by adding the value of each emotion in the pertaining category, then dividing by the number of total emotions circled in that specific category. For each subject, session, and scale, differences were calculated as post-session score minus pre-session scores. For each session, the mean and standard deviation (SD) of each emotion scale difference overall participants were calculated. We also examined the means and SDs of each scale according to the maximum number of sessions attended. Hospital pharmacy provided the data on as needed medication administration during the project period. Restraints and seclusions were tracked through nursing hospital records.

3. RESULTS

The average daily census on the unit was seventeen patients. One hundred thirty-two patients participated in the new group; however, eighty patients had sufficient data for before and after group analysis. The demographic and diagnostic characteristics of the patients are displayed in Table 1. Average group attendance was 41% of the daily census. Average agitation incidences were 2% of daily census, and the average of as-needed medications administrations was 10% of daily census. We observed a dramatic decrease in as needed medications for agitation/anxiety during three months of group implementation compared to 1 month before the group. 1-month pre-group as needed medications administration count was 576, three months as needed medications administration count after the group implementation was 120. Agitation medications were almost seven times decreased. Anxiety medications were four times decreased. Total as needed medication administration was almost five times decreased (see Figure 2). After their initial session, patients indicated an increase in happy feelings (mean = 0.46, SD = 0.978), a decrease in sad feelings (mean = 0.44, SD = 1.078), and a decrease in anger (mean = 1.15, SD = 1.984). The change was calculated as the Post-Session Score minus Pre-Session Score from a set of Likert-type scales designed to rate feelings of happiness, sadness, and anger. A positive change, as with “Happy”, indicates an increase in that emotion by the end of the session. Negative values, as seen for “Sad” and “Angry”, indicate a decrease in that emotion by the end of the session. A reasonably constant impact can be seen in increased happiness and decreased sadness. However, the most significant effect is seen with the reduction in anger (see Figures 3-4).

Restraints decreased from 7 during the month before the project to 3 during three months of the project; seclusion incidents went down from 8 to 1, respectively. The training of the nursing staff took place after the success of this

project. The results of this training showed that five sessions 1 hour each was sufficient for the nurses to feel comfortable conducting the group; their implementation of the groups improved patient-nurse relationships and decreased agitation on the unit.

Table 1. Demographic and Clinical Characteristics of the patients attended group on an inpatients unit (n = 132)

	N	%
Gender		
Male	69	52
Female	63	48
Race/Ethnicity		
Caucasian	97	73
African American	29	23
Hispanic	5	4
Asian	1	0.8
Employment Status		
Employed	4	3
Unemployed (disable, retired, etc.)	128	97
Living Arrangement		
Living independently/with family/group settings	113	85
Homeless	19	15
Primary Diagnosis		
Depressive spectrum disorders	31	24
Psychotic Disorder (schizophrenia-spectrum, unspecified psychosis)	30	23
Anxiety spectrum disorders (anxiety, PTSD)	25	19
Personality Disorders (cluster B)	19	14
Other conditions (adjustment, neurocognitive, eating, factitious)	16	12
Mood Disorders (bipolar, unspecified bipolar)	11	8
Substance use status (N = 110)		
Alcohol	45	41
Polysubstance	26	24
Cannabis	19	17
Cocaine	10	9
Other (opioids, benzodiazepines, methamphetamines)	10	9
	Mean	SD
Age	45	14
Years of education	14	3
Length of stay on the unit	7	5
Groups attended	1	0.2

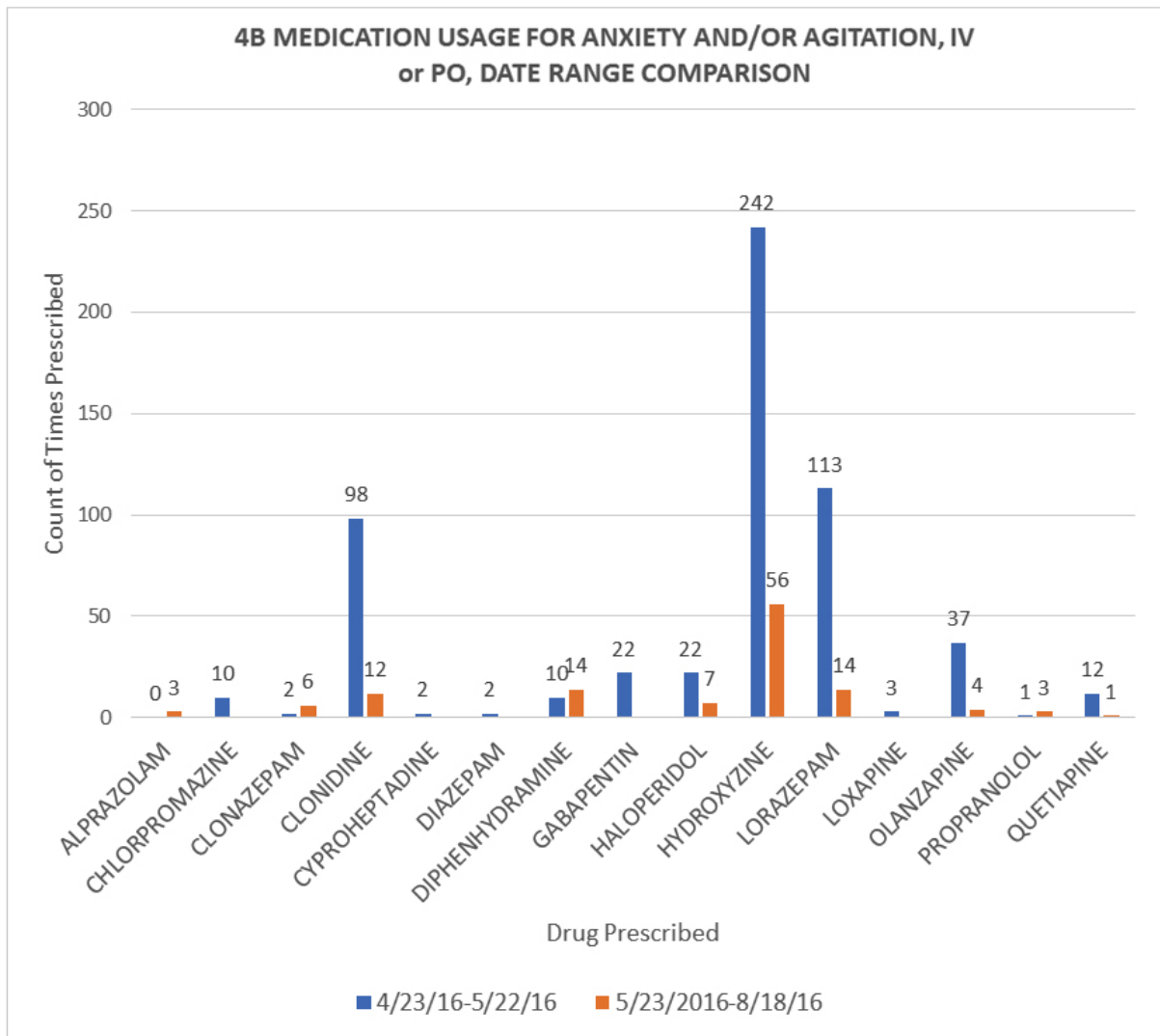


Figure 2. As needed (PRN) medication usage before and during group implementation
One-month pre-group PRN administration count was 576. Compared to three months PRN count after during group implementation was 120. Agitation medications were almost 7 times decreased. Anxiety medications were 4 times decreased. Total as needed medication administration were almost 5 times decreased

4. DISCUSSION

In this study, a decrease in the incidence of agitation, the need for extra medication administration, acceptability of new art-based group 'Neurons Away' was primarily studied. Agitation medication usage decreased by seven times; anxiety medication usage decreased by four times. The total reduction in the need for medication decreased by five times. Restraints decreased from seven a month before to three in total during the three-month study period. Seclusion incidence decreased from eight before the study to one during the three-month study period.

Neurons Away group binds on existing evidence of high reports of agitation during nursing shift change.^[19] It focuses

on distracting and redirecting the attention of the inpatients to a more playful, favorable environment, from a nursing shift change, a chaotic environment. It encouraged and helped build and practice the use of mature defense mechanisms of using humor, sublimation, altruism, and distraction, as mentioned above.

The theme of the content used in group sessions is intended to spark healthy and resourceful thinking strategies and introduce new ways of managing environmental stressors. These methodologies can be incorporated into everyday tasks and situations as preventive interventions in minimizing emotional distress and unhealthy thinking habits that can lead to acute mental health crises.

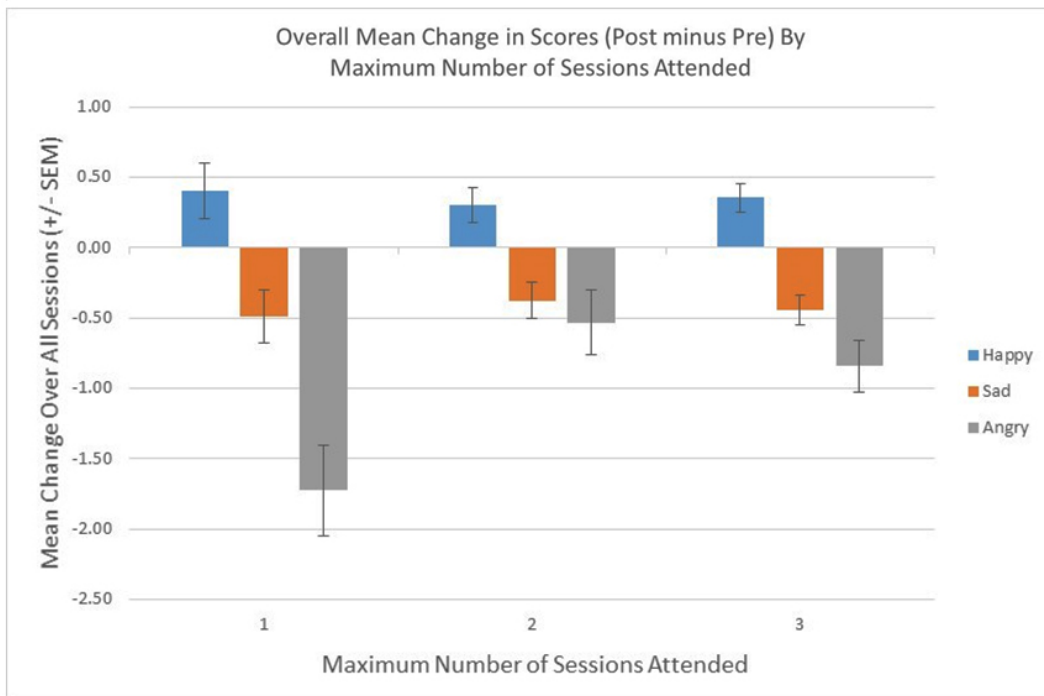


Figure 3. Average changes in emotions scores across several attended group sessions (It shows the average change in scores according to number of sessions attended (up to 3). The changes are averaged over all sessions attended (for each emotion). In other words, if a person attended 2 sessions, then the overall change at session 2 in the chart was an average of the change seen in session 1 and the change in session 2)

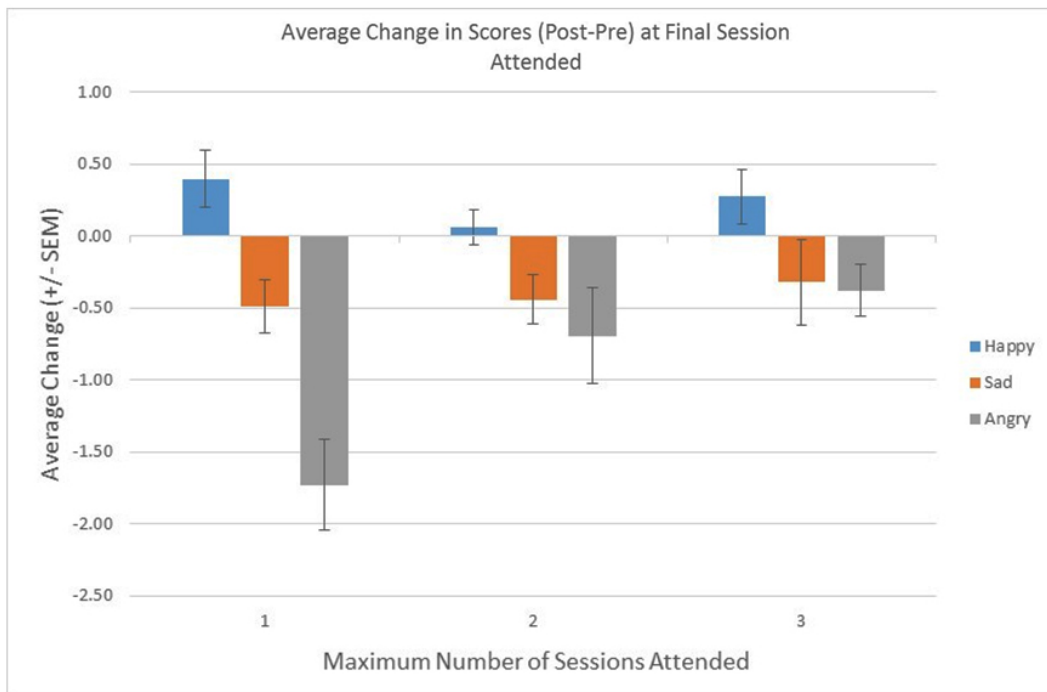


Figure 4. Average changes in emotions scores during each group session (Each Session change is shown separately for example Session 2 bars include only the Session 2 changes. While the impact on happiness & sadness is decreased over the 3 sessions, there is still a non-negligible decrease in anger at each session, which is essential in a group setting.)

Although the original study took place in an acute inpatient psychiatric setting, we aim to examine the effectiveness of these types of group sessions in a variety of public health organizations, rehabilitation centers, and youth-based organizations as preventative measures for agitation.

5. CONCLUSIONS

Conducting interactive group sessions on an acute psychiatric floor during the critical period of shift change is feasible and well received by patients and staff. Several patients said they benefited from the sessions, and results showed that the sessions helped patients feel happier, less sad, and less angry. There was also a dramatic decrease in incidents of agitation and the need for extra medication administration. Based on these findings, we demonstrated the crucial importance of art-based interactive group sessions on the acute psychiatric floor, especially during the critical period of shift changes. Teaching and learning the art of mental flexibility, perspective-shifting, and imaginative thinking through questions and activities can lead individuals to increased levels of emotional regulation. Therefore, art-based interactive groups are an effective non-pharmacologic alternative to addressing acute agitation in an inpatient psychiatric unit. As previously

mentioned, most studies are based on pharmacological interventions for agitation. Non-pharmacological measures, such as art-based group therapy, should be considered for because it is a safer alternative since there are no concerns for adverse effects and drug-drug interactions.

Future directions

We recommend educating nurses and staff members to conduct similar group sessions on the unit to help with staff-patient relationships and decrease agitation on the unit. Introduce measures that incorporate the patient-rated research-validated scales and the clinician-rated research-validated scales for evaluation of patient-related outcomes. Implement controlled study comparing Neurons Away group efficacy with other treatments. Explore other creativity-focused non-pharmacologic interventions to help reduce agitation in inpatient settings.

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CONFLICTS OF INTEREST DISCLOSURE

The authors declare they have no conflicts of interest.

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