

START NOW: How Skills-Based Therapy Programs Improve Behavioral Problems

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Educational Objectives

- Key Components of the START NOW Skills Program
- Challenges and Successes of Implementing the START NOW Skills Program in Illinois
- START NOW Data from 15 Illinois Department of Correction Facilities



START NOW...

the Why, Who, What, and How



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Why START NOW?

- The need for **more programming** statewide
- The need for **effective / evidence-based** programs to reduce behavioral problems in facilities
- The need for **cost effective** programs
- The need for programs that **specifically tailored** for prison population



Evaluating START NOW: A Skills-Based Psychotherapy for Inmates of Correctional Systems

Linda Kersten, M.Sc., Andrew M. Cislo, Ph.D., Miranda Lynch, Ph.D., Kirsten Shea, M.B.A., Robert L. Trestman, Ph.D., M.D.

Published Online: 17 Aug 2015

Objective: This study investigated whether higher attendance in a skills-based group therapy program designed for inmates was associated with fewer rule infractions as reflected in the number of disciplinary reports received in a state correctional system.

Methods: Administrative data were provided by the Connecticut Department of Correction and Correctional Managed Health Care at UConn Health, the system's health care organization. This was a retrospective cohort analysis of START NOW program participation events from 2010 through 2013 (N=946). Participants were adult male and female inmates, both sentenced and unsentenced, with and without recorded psychiatric diagnoses. The number of disciplinary reports was documented for up to six months after program participation. Incident rate ratios are presented from zero-inflated negative binomial regression models. Predictive margins examined variation in the effect

of sessions attended on disciplinary reports in the postprogram period across security risk groups and primary psychiatric diagnosis groups.

Results: For each additional session of START NOW completed, a 5% reduction was noted in the incident rate of disciplinary reports. The effect of program participation was robust to all model considerations. Inmates with higher overall security scores appear to benefit most from program participation. The program was also found to be effective across primary psychiatric diagnosis classifications.

Conclusions: START NOW was shown to be an effective treatment option for reducing disciplinary infractions by inmates.

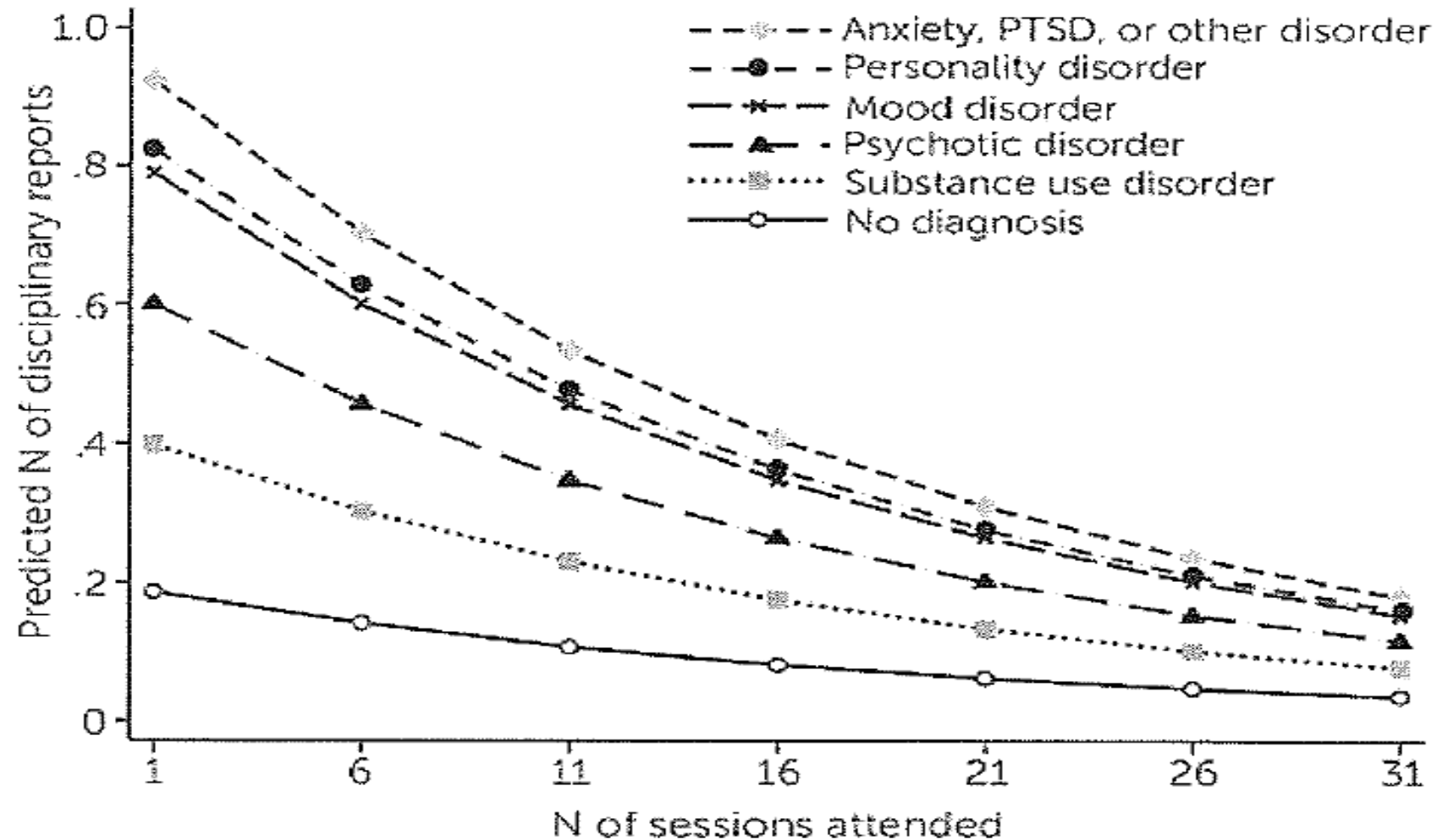
Psychiatric Services in Advance (doi: 10.1176/appi.ps.201400471)

5% reduction in
Disciplinary Report
For Each Additional
START NOW Session



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Psychiatric Disorders



Psychiatric Hospitalization After Participation in START NOW

TO THE EDITOR: START NOW is a 32-session, skills-based, group psychotherapy for inmates of correctional systems. We previously found that inmates who completed more program sessions had fewer subsequent disciplinary infractions during incarceration (1). However, because the effect on clinical outcomes remained unknown, we tested whether number of sessions completed is predictive of number of inpatient psychiatric days up to six months after program participation. The study was approved by the UConn Health Institutional Review Board (no. 14-132-2).

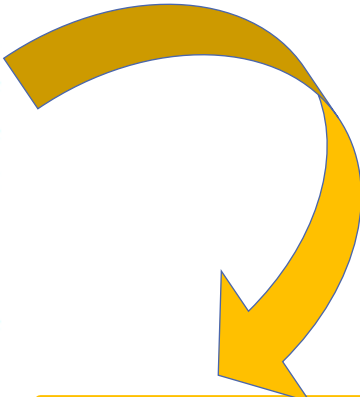
We included program participation events occurring from 2010 through 2013 (N=953). Zero-inflated negative binomial regression was used. Standard errors were adjusted for clustering within the individual because an individual could participate in the program more than once. The need score for mental health care (assigned by UConn Health psychiatric staff) was used in the logistic portion of the two-stage model. Because our earlier study found significant variation in program effect across security risk groups (scores assigned by the Connecticut Department of Correction), we examined both main and conditional effects of number of sessions completed across security risk groups.

START NOW appears to have had a beneficial clinical effect, particularly for inmates with higher security scores. Each session completed was associated with a 5% decrease in subsequent hospital days. Although the findings are promising, two limitations should be noted. First, inpatient psychiatric hospitalization was a relatively rare event. Although we had a sufficient sample size to pursue this investigation, larger samples would increase confidence in the program's clinical effect. Other measures of clinical effectiveness are also warranted. Second, unmeasured external forces concurrent to START NOW may have influenced later hospitalization (for example, other programming). However, the findings strongly suggest a beneficial program effect on hospitalization and contribute to the modest literature on evidence-based correctional psychotherapy (2).

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1. Kersten L, Cislo AM, Lynch M, et al: Evaluating START NOW: a skills-based psychotherapy for inmates of correctional systems. *Psychiatric Services* 67:37-42, 2015
2. Gannon TA, Ward T: Where has all the psychology gone?: A critical review of evidence-based psychological practice in correctional settings. *Aggression and Violent Behavior* 19:435-446, 2014

Andrew M. Cislo, Ph.D.
Robert L. Trestman, M.D., Ph.D.



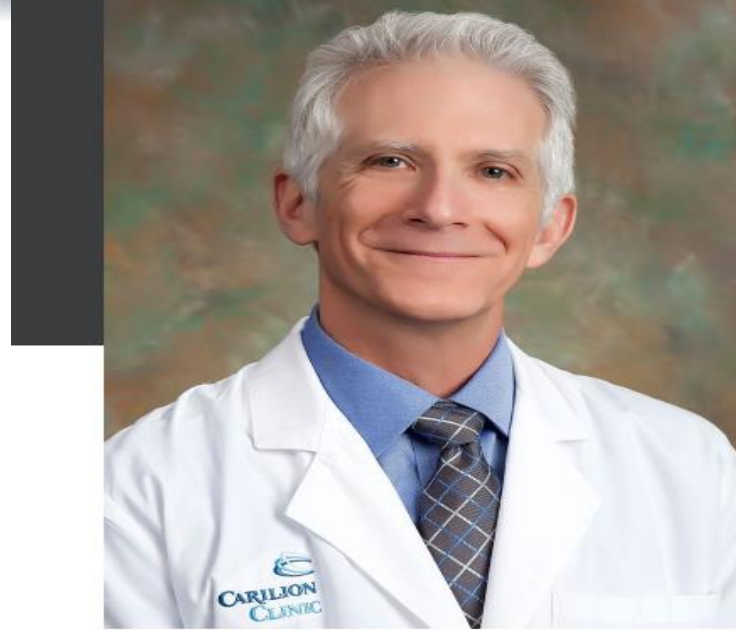
Each session completed was associated with a 5% decrease in subsequent hospital days.

Psychiatric Services 67:1, January 2016



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Who is the Person Behind the START NOW Program?



- [Carilion Clinic](#)
- [START NOW Overview](#)

Robert L. Trestman, PhD, MD

Chair, Psychiatry and Behavioral Medicine



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What is START NOW?



START NOW is a manual-guided skills training program designed to target individuals who present with mood dysregulation, impulsivity (including self-injurious behavior), aggression, addictions, and/ or interpersonal discord

- Originally developed for correctional settings; now specifically adapted for forensic psychiatric units, and community settings
- All materials are freely available and in the public domain
- Already in use in multiple state correctional systems, forensic psychiatric hospitals, and community settings in the US and Canada

Structure & Design

- 32 sessions divided into 4 skill-based units
- Twice weekly for 16 weeks (recommended) or one time per week for 32 weeks
- 75 minutes in length (adaptable)
- Potential for rolling admissions at beginning of each new unit

START NOW designed specifically for psychiatric settings

- Concepts & language are simplified given potential cognitive or educational limitations
- Numerous images included in the participant workbook- especially useful with TBI or verbally limited participants
- Illustrative examples & coping behaviors are contextually relevant



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START NOW Sessions

Unit 1- My Foundation: Starting with Me (10 sessions)

- Developing increased self-control & ability to cope with stressors
- Includes setting a treatment goal, increasing wellness skills, accepting yourself & your situation, enhancing your spirituality, values & personal boundaries

Unit 2- My Emotions: Dealing with Upset Feelings (8 sessions)

- Recognizing & understanding emotions.
- Coping with emotions through actions, or through thoughts & imagery
- Coping with depression, anger, anxiety & grief

Unit 3- My Relationships: Connecting with Others (8 sessions)

- Developing positive relationship skills
- Includes listening skills; assertiveness; setting boundaries; asking for support; avoiding destructive relationships; responding to feedback; coping with rejection

Unit 4- My Future: Setting & Meeting my Goals (6 sessions)

- Preparing for a positive future
- Includes topics of developing hope; setting realistic goals & breaking them down into steps; learning problem solving skills; learning to set and meet educational & vocational goals

Additional Implementation Procedures

- Certification of Facilitators
- Quality Assurance procedures including fidelity monitoring and attendance documentation
- Participant & facilitator satisfaction surveys



Challenges and Successes of Implementing **START NOW** Program



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Challenge and Success #1 – Support from Administration

- Introduce START NOW to the Program Committee
- Cost for training facilitators
- Provided START NOW data and empirical articles to the Statewide Program Committee for consideration. This was approved.
- Dr. Trestman agreed to allow IDOC to conduct its own training in exchange for data



Challenge and Success #2a – “Buy-in”

- New program, huge learning curve
- Three to four months process to convince an individual to pilot the START NOW program
- Piloted START NOW in two facilities
 - Male Medium Security Level Facility
 - Female Medium Security Level Facility (General Population, Restrictive Housing, Mental Health Caseload)
- Is the current approach / program working?
- No downside in programming individuals with behavioral problems



Challenge and (*maybe*) Success #2b – “Buy-in”

- Training facilitators who are **not** (but a few are) motivated to facilitate groups and not trained to facilitate groups
- Overhaul our training by:
 - More time spent on role playing
 - Data that shows improvement in individuals with behavioral problem opens the dialogue for these facilitators
 - Provide a safe working environment for all



Challenge and Success #3 - Training

- Slides provided by START NOW are good but lengthy for a two-day training
- No training model to emulate
 - There is training videos available now
- Training model – Extensive information (DBT, Motivational Interviewing, CBT, Trauma sensitive care, Cognitive neurorehabilitation, etc.) for a two-day training
- Created training model that focuses specifically for Illinois Department of Corrections START NOW Facilitators
 - Masters level vs. Bachelor level facilitator
- Current training emphasizes the Mind, Brain and Behavior
- Three teams of trainers and by region



What Makes START NOW Program Successful?

Two Primary Skills of START NOW

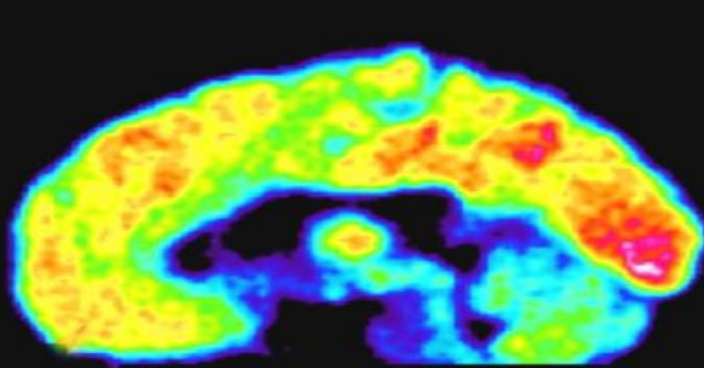
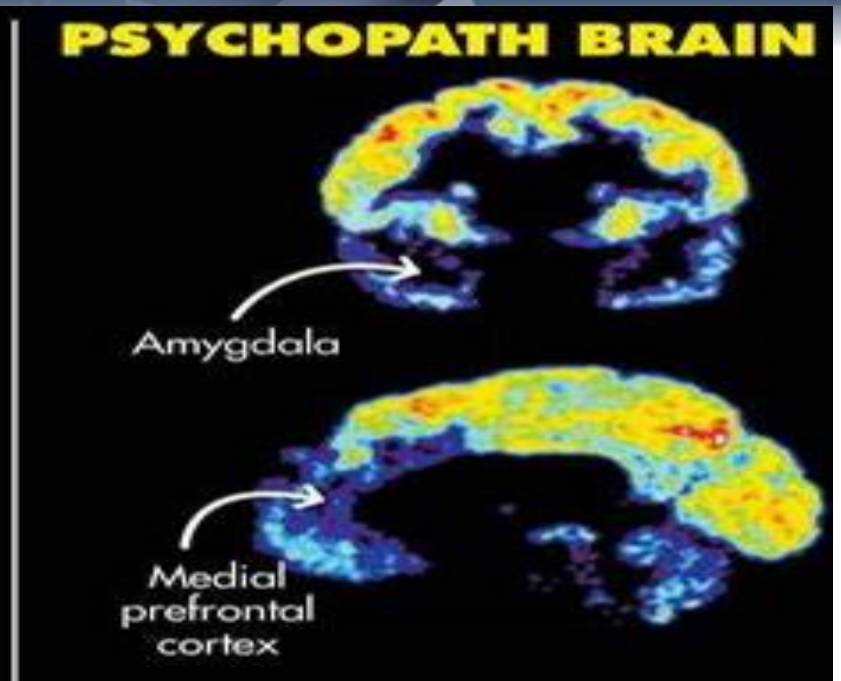
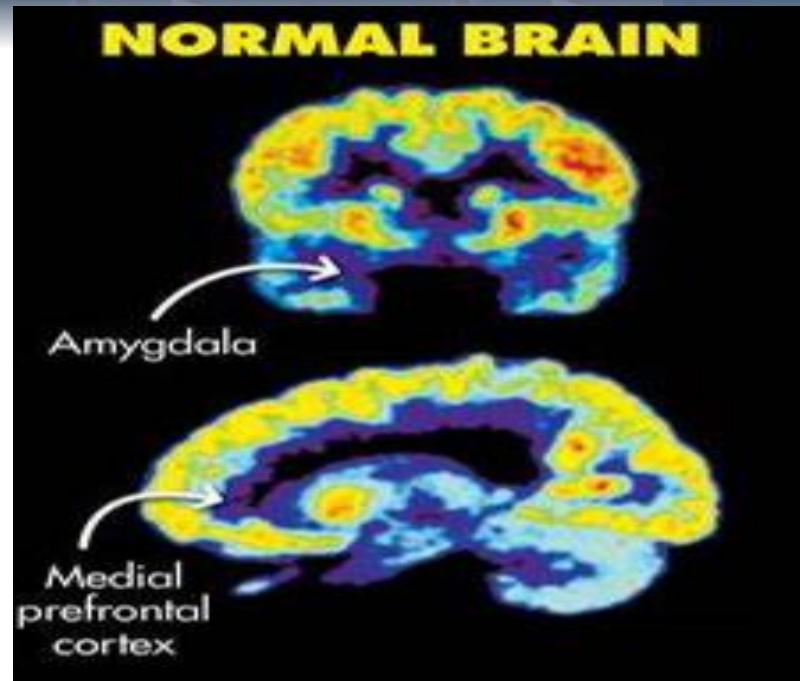
- Focusing Skills
 - Participants practice focusing skills using a variety of modalities including breathing, cognitive, visual, sound, and imagery.
- ABC System (Functional Analysis)
 - A way of looking at behavior, breaking down actions into 3 parts:
 - A = Activators; B = Behavior; C = Consequences
- Can be used for both problematic and constructive behaviors

Rebuilding parts (possible damage) of the brain (Neuroplasticity)

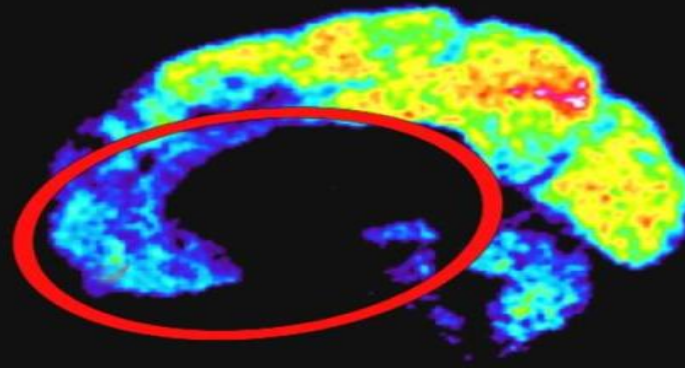


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Focusing Exercise →



NORMAL



PSYCHOPATH

← ABC System



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Impact of Trauma

- How the Brain and Body React to Trauma
 - The **Amygdala** initiates the fight or flight response of the brain and body
 - Involves in **fear, aggression** and **social interactions**



The Amygdala and Fear Conditioning: Has the Nut Been Cracked?

Stephen Maren and Michael S. Fanselow
Department of Psychology
University of California
Los Angeles, California 90095

Pavlovian fear conditioning is a ubiquitous form of learning that involves the association of stimuli and their aversive consequences. Perhaps the quintessential example of Pavlovian fear conditioning is Watson and Rayner's (1920) experiment with "Little Albert." In this experiment, Albert, a normal and healthy child attending day care, was shown a white rat by Rayner. Not surprisingly, Albert's first reaction to the white rat was curiosity, and when presented with the rat he reached out to touch it. In response to Albert's attempt to touch the rat, Watson, who had been closely observing Albert's interaction with the rat, sounded a loud and frightening noise by hammering an iron rail. Albert, startled and scared by the noise, quickly withdrew from the rat and began crying. Watson and Rayner continued the procedure, and after a few more presentations of the white rat followed by

Minireview

Kluver–Bucy syndrome, that was characterized by visual agnosia, hypersexuality, reduced neophobia, and, importantly, loss of fear. Later work indicated that the reduced fear in resected monkeys was due specifically to damage in the amygdala. Consistent with its general role in fear, reports began to emerge that the amygdala was also required for aversive learning, including the acquisition of conditioned avoidance responses in cats and conditioned emotional responses in rats. Together, these reports provided a strong foundation for amygdaloid involvement in fear and aversively motivated learning.

Building upon this foundation, considerable progress has been made in the last decade further defining the anatomy of the amygdaloid fear system (Figure 1). It is now apparent that within the amygdala there are two subsystems that have unique roles with regard to fear conditioning (Davis et al., 1994; Fanselow, 1994; LeDoux, 1995). The basolateral complex of the amygdala (BLA; comprised of the lateral [LA], basolateral [BL], and basomedial [BM] nuclei) is a substrate for sensory convergence from both cortical and subcortical areas,



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Brain structure and function

The amygdala — a part of the brain involved in fear, aggression and social interactions — is implicated in crime. Among the research that points to this link is a neuroimaging study led by Dustin Pardini, PhD, of the University of Pittsburgh. His team found that 26-year-old men with lower amygdala volumes were more than three times more likely to be aggressive, violent and to show psychopathic traits three years later than men of the same age with more normal-sized amygdalas — independent of factors including history of violence and social background ([*Biological Psychiatry*, 2013](#)).

Other research, such as an fMRI study led by psychologist Andrea Glenn, PhD, of the University of Alabama, suggest that amygdala functioning — not just size — is also more likely to be reduced among those with psychopathic tendencies ([*Molecular Psychiatry*, 2009](#)).



Methods

Participants were selected from a longitudinal study of 503 male subjects initially recruited when they were in the first grade in 1986–1987. At age 26, a subsample of 56 men with varying histories of violence was recruited for a neuroimaging substudy. Automated segmentation was used to index individual differences in amygdala volume. Analyses examined the association between amygdala volume and levels of aggression and psychopathic features of participants measured in childhood and adolescence. Analyses also examined whether amygdala volume was associated with violence and psychopathic traits assessed at a 3-year follow-up.

Results

Men with lower amygdala volume exhibited higher levels of aggression and psychopathic features from childhood to adulthood. Lower amygdala volume was also associated with aggression, violence, and psychopathic traits at a 3-year follow-up, even after controlling for earlier levels of these features. All effects remained after accounting for several potential confounds.

Conclusions

This represents the first prospective study to demonstrate that men with lower amygdala volume have a longstanding history of aggression and psychopathic features and are at increased risk for committing future violence. Studies should further examine whether specific amygdala abnormalities might be a useful biomarker for severe and persistent aggression.

1-1-2014

Lower Amygdala Volume in Men is Associated With Childhood Aggression, Early Psychopathic Traits, and Future Violence

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Adrian Raine

University of Pennsylvania, araine@sas.upenn.edu

Kirk Erickson

Rolf Loeber



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At least one study indicates that such deficits may appear long before people commit crimes. Adrian Raine, DPhil, of the department of criminology at the University of Pennsylvania, led a study with Yu Gao, PhD, at CUNY-Brooklyn that examined fear conditioning, which is dependent on amygdala function, in a group of 1,795 3-year-olds. The researchers put electrodes on the children's fingers while repeatedly playing two tones: one that was followed by a loud, unpleasant sound and another that was played alone. Subsequently, the difference in sweat responses to each tone by itself yielded a measure of each toddler's fear conditioning. Twenty years later, the team identified participants who had gone on to commit crimes and compared them with noncriminal counterparts, matching them on gender, ethnicity and social adversity. They found that those children who went on to commit crimes had "simply failed" to demonstrate fear conditioning, Raine says. In other words, they were fearless when most of us would be fearful. This finding suggests that deficits in the amygdala, which are indirectly identifiable as early as age 3, predispose to crime at age 23 ([The American Journal of Psychiatry](#), 2010).

"biology is not destiny. We can change the biological roots of crime and violence"

– Dr. Adrian Raine



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up. One is a study in New Mexico in which prisoners are scanned on release. "What they are discovering is that if the functioning of the anterior cingulate, part of the limbic system, is lower than normal before release, they are twice as likely to be reconvicted in the next three years. And that marker is more accurate a guide than all other social factors," Raine says. A second study apparently shows if a released prisoner has a significantly smaller volume in the amygdala, the almond-shaped part of the brain crucial for processing memory and emotion, he or she is three times more likely to reoffend. "Now, this is only two studies, but what they are

"A Murderer's Brain Vs a Normal Brain"

Tim Adams, May 12, 2013

<https://www.businessinsider.com/murder-brain-scan-2013-5>



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ADVANCES IN NEUROPSYCHIATRY

Neuropsychiatry of frontal lobe dysfunction in violent and criminal behaviour: a critical review

M C Brower, B H Price

Abstract

Objectives—To establish the link between frontal lobe dysfunction and violent and criminal behaviour, based on a review of relevant literature.

impulsive, trivially motivated, or habitual aggression.⁵⁻⁷ But whereas clinical observation and current theories of prefrontal network function suggest that frontal lobe disorders may contribute to violent and criminal behav-

Journal of Neurology, Neurosurgery and Psychiatry (2001) December, 7 (6), P 720-726

doi: 10.1136/jnnp.71.6.720.



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Challenge and Success #4 – Fidelity Monitoring Issues

- START NOW requires fidelity monitoring and provides Fidelity Instrument to ensure program integrity
 - One of the many strengths of START NOW
- Need additional staff to sit in to ensure program fidelity
 - Additional work but it is worth the effort
- Regionals sat in START NOW groups
- Correctional Assessment Specialists



Challenge and (*in progress*) Success #5 – Data Collection and Analyses

- The arduous task of data collection
- Started out with Excel spreadsheet
 - START NOW Assessment Protocol
 - Patient Satisfaction Survey
 - Buss Perry Aggression Questionnaire
 - Infractions / Disciplinary Tickets
 - Days in restrictive housing
 - Days spent on crisis
- Sharepoint and MS Forms



START NOW Calculator and MS Forms



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START NOW Overall Findings (Nationwide)

- The effectiveness of the program is robust to all model considerations.
- For each additional session of START NOW completed, added benefits are gained.
- Inmates with higher overall security scores appear to **benefit the most** from the program.
- The program is found to be effective across primary psychiatric diagnosis classifications.



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START NOW DATA: An Analysis

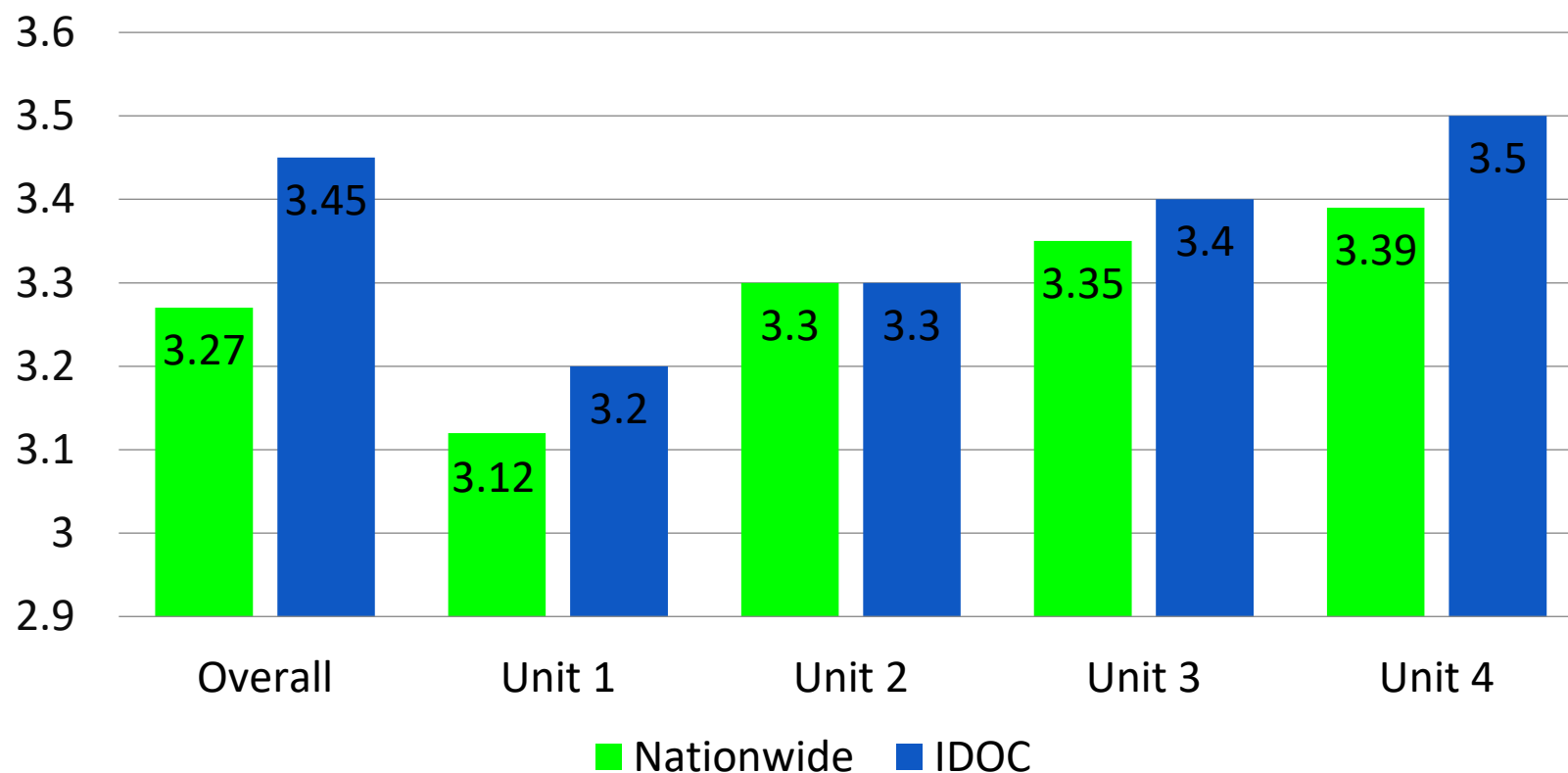


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Participant Satisfaction Data (Nationwide N=619; IL N=314-318)

Has participation in this START NOW unit helped you cope with daily life in prison/jail?

Nationwide vs IDOC

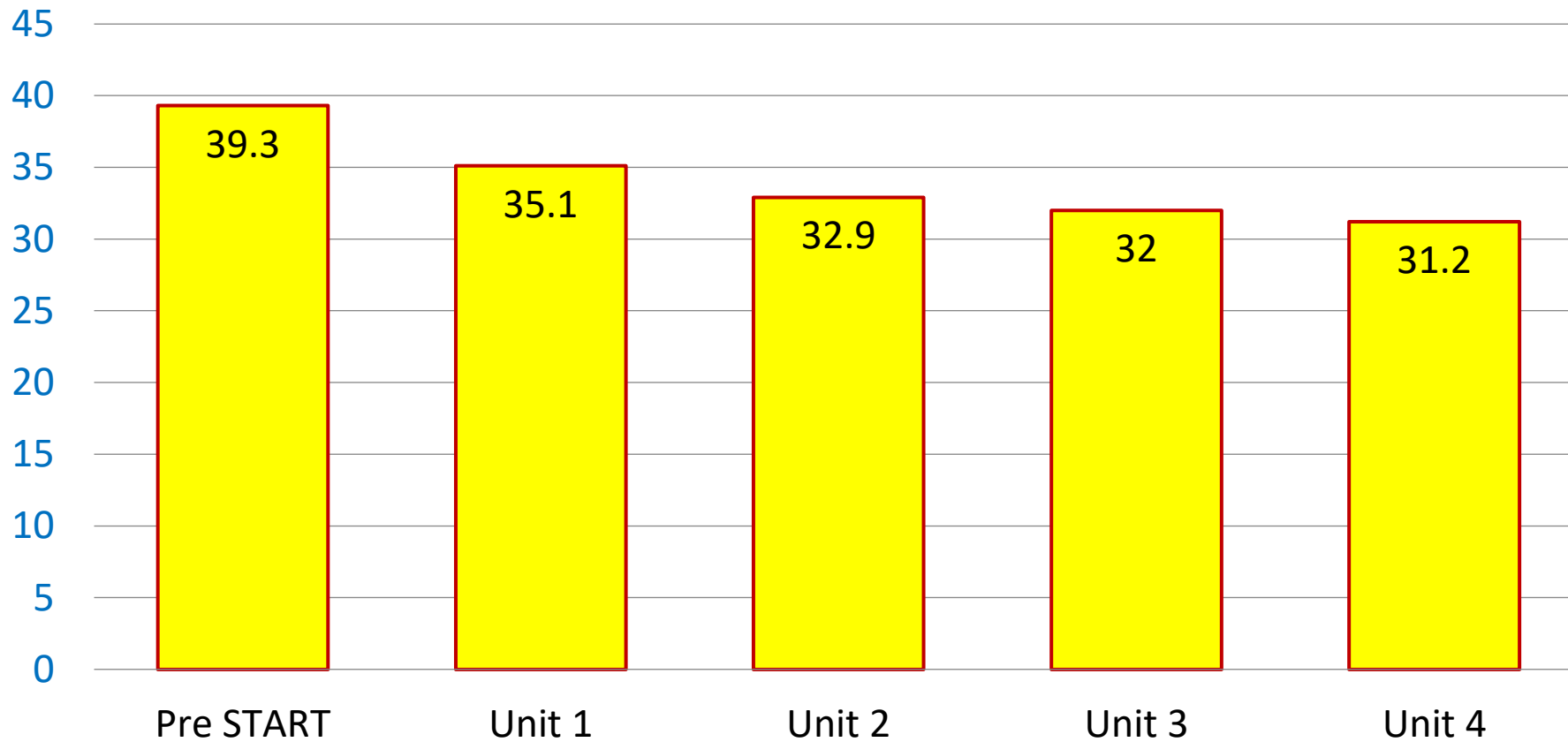


4 = Yes, it helped a great deal.
3 = Yes, it helped.
2 = No, it really didn't help.
1 = No, it seemed to make things worse.



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Illinois START NOW Assessment Protocol (SNAP)

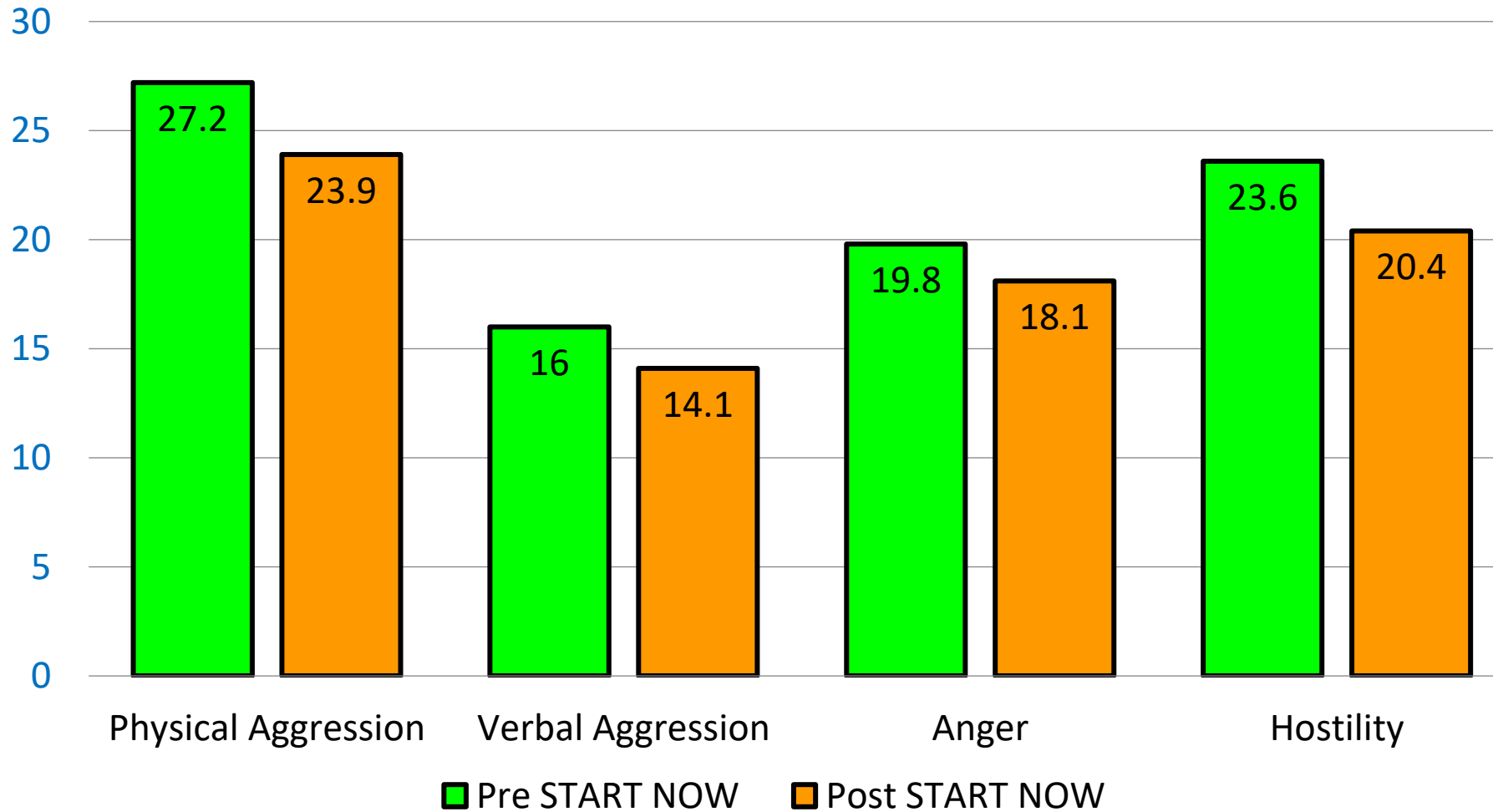


N = 314-318



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Buss Perry Aggression Questionnaire



N = 314-318



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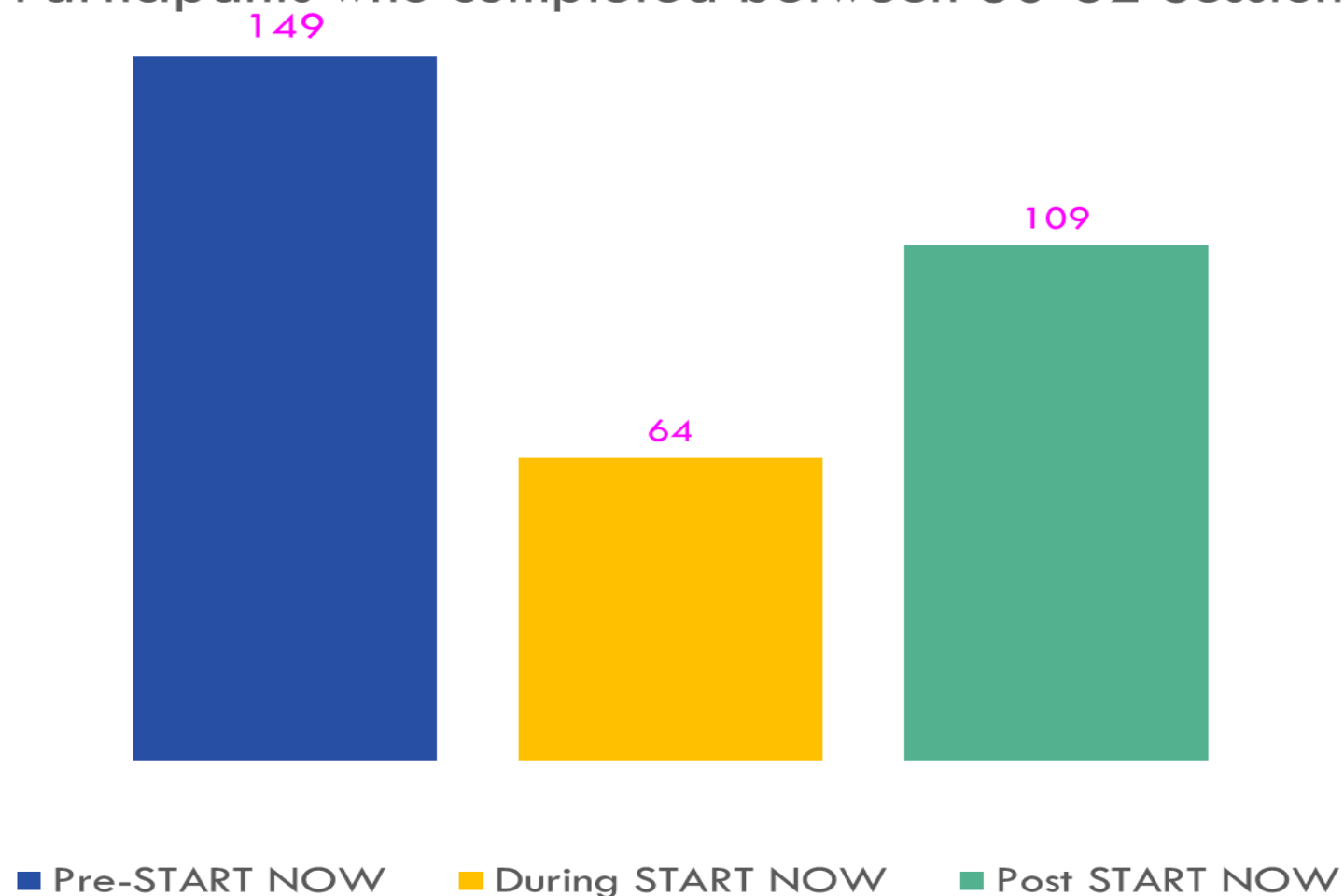
START NOW Data

- **344** = number of participants attended START NOW program
- **201** = number of participants completed 30-32 sessions of START NOW
- **143** = number of participants participated in START NOW however these participants did not reach more than 30 sessions for the following reasons:
 - Refused to continue with the program
 - was removed from START NOW due to disciplinary reasons
 - transferred out to another facility
 - Paroled
- The following slides only pertain to participants who completed at least 30 START NOW sessions.
Thus, total number of participants in this study = **201**

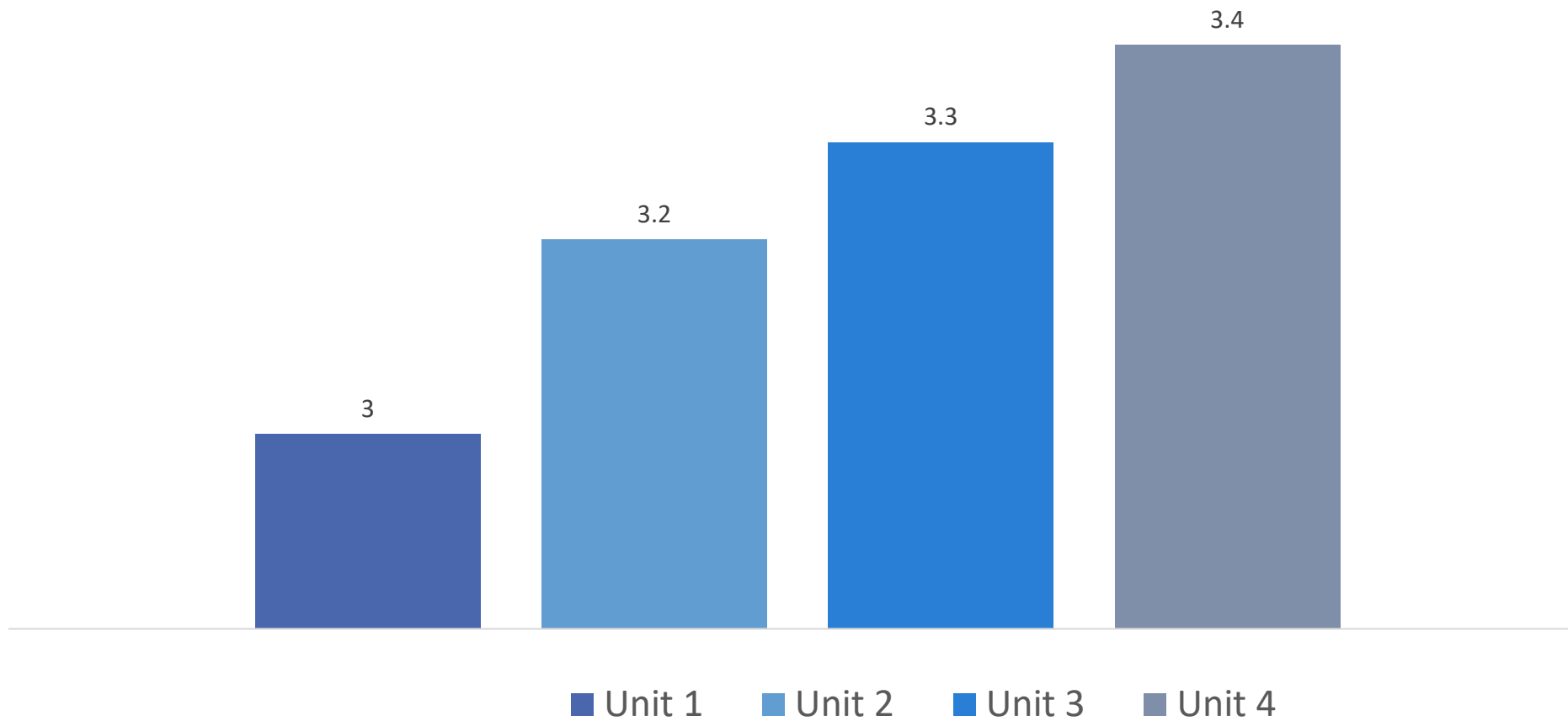


START NOW Participants' Infractions

Participants who completed between 30-32 Sessions

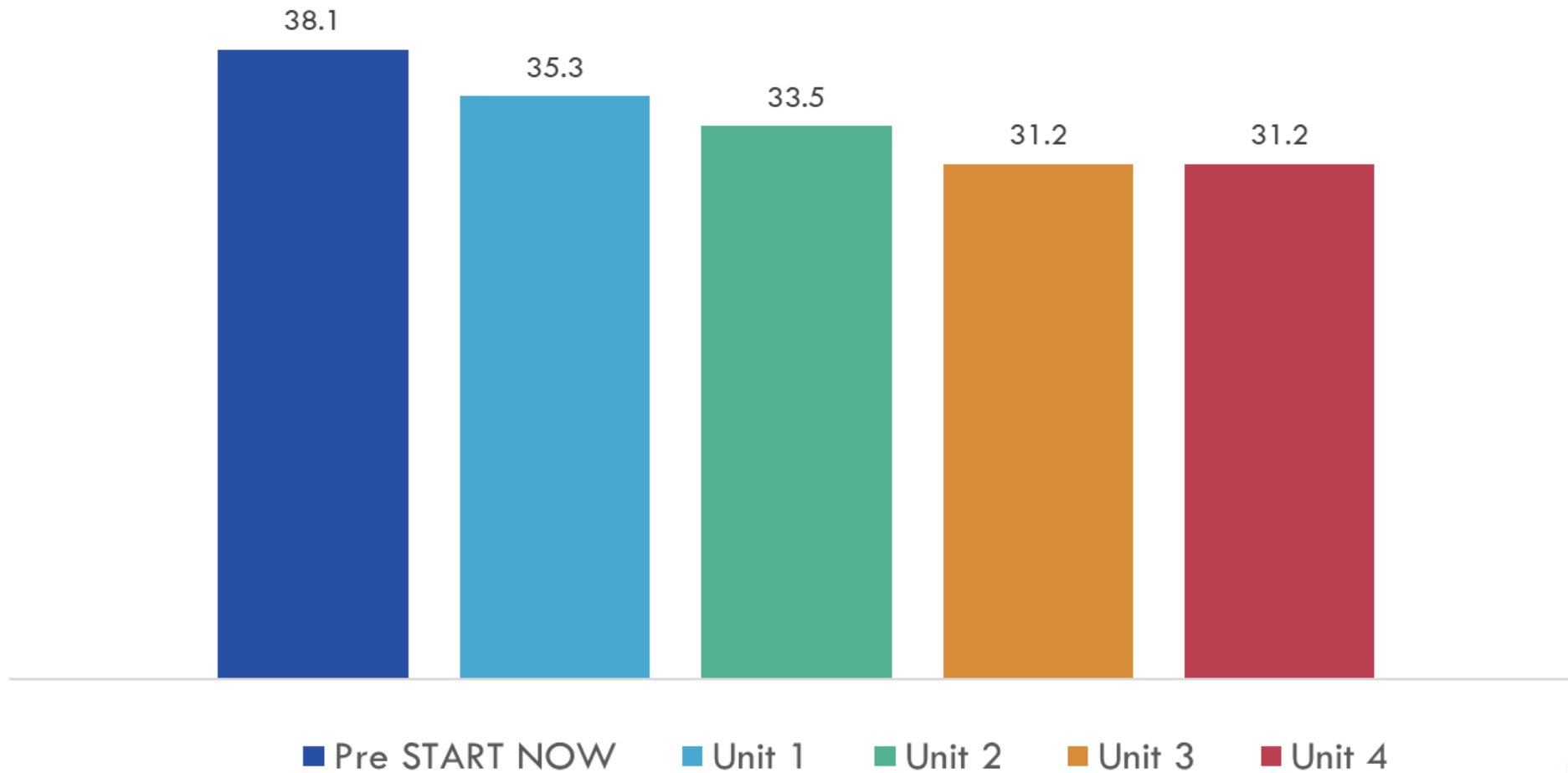


START NOW Patient Satisfaction Survey



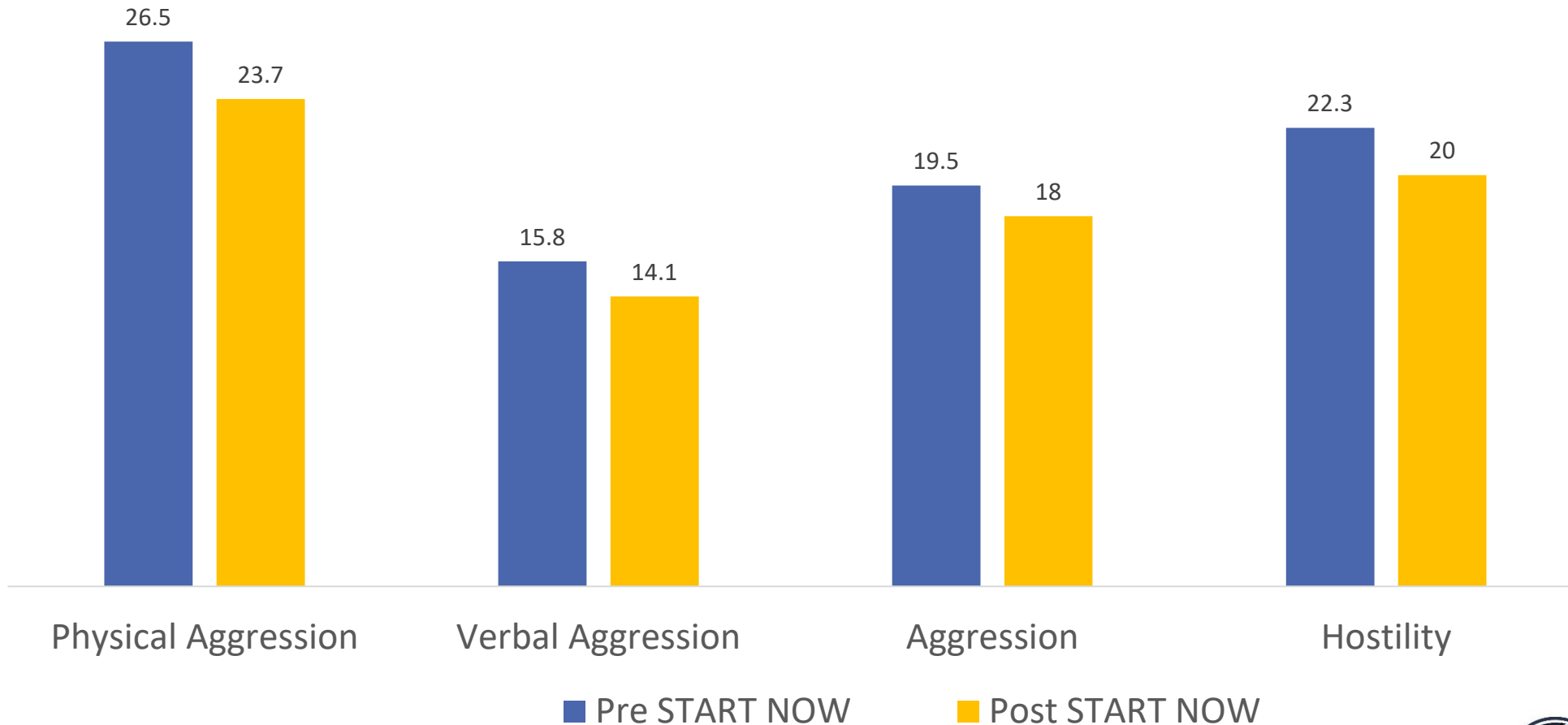
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START NOW Assessment Protocol

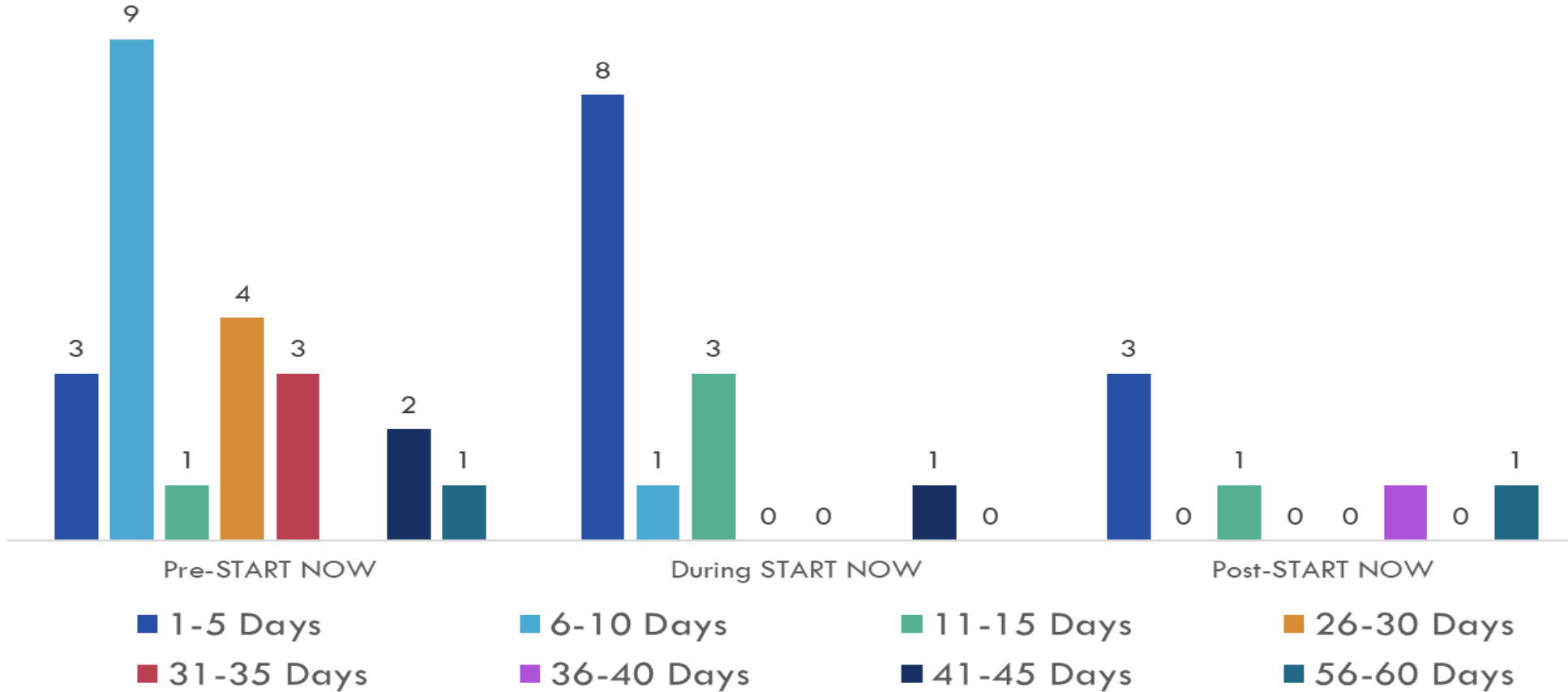


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Buss Perry Aggression Questionnaire



Restrictive Housing



Dr. Robert Trestman - START NOW: An Effective
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Questions?



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Session 427

Thank you so very much for coming!

For More Information on START NOW Program

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Illinois Department of Corrections



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Trestman R. (2021) – START NOW: An Effective Mental Health Intervention Oct 20, 2021 | Psychology and Neuroscience. Available online at: Scientia global. <https://doi.org/10.33548/SCIENTIA747>

