

Attachment Security in a Dyadically-Informed Perinatal Partial Hospitalization Program (PHP)

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ABSTRACT

The Perinatal Partial hospitalization Program (PHP) has revolutionized treatment of severe maternal mental illness by incorporating the infant into the therapeutic frame, providing an effective and time-limited model of care for treating symptoms of Postpartum Mood and Anxiety Disorders (PMADs) and thereby lessening the impact of intergenerational transmission of relational trauma.

Participants included 70 peripartum individuals with moderate to severe PMADs participating in a Perinatal PHP. We hypothesized that patients would benefit from dyadically-informed psychotherapies within a short-term treatment, demonstrating improvement in mother-infant bonding as measured with the Postpartum Bonding Questionnaire (PBQ), as well as reduced anxiety and avoidance in adult attachment relationships as measured with the Adult Attachment Questionnaire (AAQ).

Between admission and discharge from the PHP, mean scores of the AAQ and PBQ showed statistically significant improvement in our patient population, suggesting that short-term treatment models can effectively improve attachment security and infant bonding, respectively.

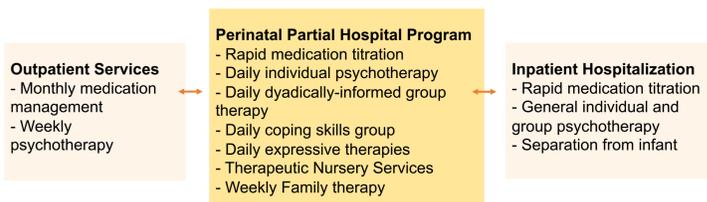
BACKGROUND

Perinatal Mood and Anxiety Disorders (PMADs) are the most common pregnancy-related complication in developed Countries, and Postpartum Depression affects up to 20% of new mothers (ACOG, 2015; Gavin et al., 2005). Maternal mental illness can complicate bonding in the initial postpartum period, with potential for lasting impact on attachment relationships throughout the lifespan.

Maternal attachment insecurity is a significant risk factor for postpartum depression (PPD) and can contribute to insecure attachment in the infant due to suboptimal caregiving experiences (Monk et al., 2008; Rholes et al., 2011; Robakis et al., 2016; Wallace, et al., 2016). Perinatal women with more acute symptomatology might demonstrate limited abilities to engage or remain present within mother-infant interactions. The most dangerous risk of acute PPD is suicide or infanticide.

Despite high incidence of PMADs in the United States, treatments for perinatal populations with moderate to severe mental illness remains limited. While inpatient hospitalization is often indicated to ensure safety and provide rapid symptom relief, it usually necessitates separation of mother and infant, which results in further disruption of the mother-infant relationship. Perinatal Partial Hospital Programs (PHPs) offer an alternate care setting which provides intensive psychiatric treatment (5 days per week) for both mothers and their babies. Perinatal PHPs facilitate secure maternal attachment through dyadically-informed psychotherapy (Sokol, et al., 2014).

The Motherhood Center of New York (TMC) is an independent specialized treatment center that provides mental health care to perinatal women. The flagship program, which opened in 2017, is a partial hospitalization program (PHP) for pregnant women and new mothers. The program provides a combination of therapeutic support including medication management, dyadically-informed and trauma-informed individual psychotherapy, as well as comprehensive group therapy programming comprised interpersonal process, dyadic, coping skills, infant care education and expressive therapies including yoga, meditation and art. Patients are followed by individual therapists and a reproductive psychiatrist. Mother-infant dyadic psychotherapy is available in both the individual and group settings.



METHOD

This study was approved by the Johns Hopkins University Institutional Review Board. Participants included peripartum individuals with PMADs referred to the PHP at The Motherhood Center in New York. 70 individuals completed in the program between January 13, 2021 and January 17, 2022. Of these, 12 were excluded due to incomplete admission or discharge measures. 54 patients were postpartum with infants ages 0-12 months, while 4 patients were pregnant.

Participants attended the program 5 hours per day, 5 days per week, during which they received medication management, individual psychotherapy and dyadically-informed group-based programming. The average length of stay for this cohort was 54 days. Treatment was delivered remotely through virtual programming due to the COVID-19 pandemic.

Measures were collected at admission and upon discharge, at end of treatment. Maternal attachment was measured with the AAQ, a 17-item self-report questionnaire that measures two dimensions of adult attachment – avoidance and anxiety. Mother-infant bonding was measured with the PBQ, a 15-item self-rating scale assessing the mother's feelings towards the child, with four subscales to detect specific challenges including (1) Impaired bonding, (2) Rejection and pathological anger, (3) Infant-focused anxiety and (4) Incipient abuse. Among pregnant patients, AAQ measures were included in the analyses while PBQ were not administered given the infant was not yet born. Depressive symptoms were assessed using the Edinburgh Postnatal Depression Scale (EPDS) – a 10-item self-report measure validated within the perinatal population.

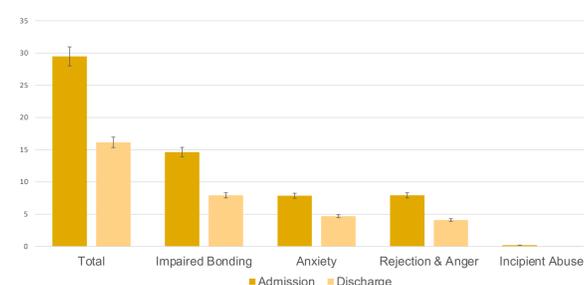
RESULTS

The primary goal of the perinatal PHP is treatment of perinatal mood symptoms. EPDS scores on admission ranged from 7-29, with a mean of 20 ($SD=4.197$), demonstrating significant improvement upon discharge with a mean of 9.2 ($SD=4.20$).

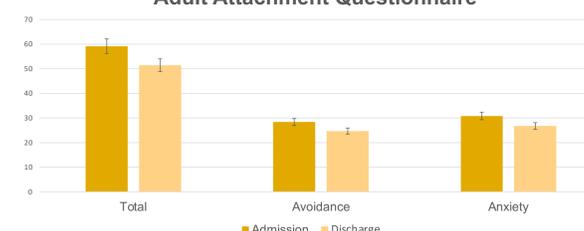
In an effort to assess overall improvements in postpartum bonding following completion of perinatal PHP, a paired sample t-test was conducted. This test was found to be statistically significant, $t(51)=6.54, p<.001$. The test demonstrated a large effect size ($d=.90$). These results indicated increased postnatal bonding at end of treatment ($M=16.8, SD=10.8$) in comparison to baseline assessment ($M=30.6, SD=19.4$). Improvements in subscale scores (impaired bonding, infant-focused anxiety, rejection and pathological anger, and incipient abuse) were also observed.

In addition, a paired sample t-test was conducted to assess potential changes in adult attachment. This test was also found to be significant, $t(56)=4.21, p<.001$. The test demonstrated a moderate effect size ($d=.56$). These results indicated reductions in attachment insecurity at end of treatment ($M=51.4, SD=18.10$) in comparison to baseline assessment ($M=59.5, SD=20.71$). Improvements in subscale scores (avoidance and anxiety) were also observed.

Postpartum Bonding Questionnaire



Adult Attachment Questionnaire



Demographics

Total	N=58 (%)
Age	Mean 34 years (SD 4.18)
<20 years old	0 (0)
20-29 years old	10 (0.17)
30-39 years old	43 (0.74)
>40 years old	5 (0.09)
Reproductive Status	
Pregnant	4 (0.06)
Postpartum	54 (0.93)
Race/Ethnicity	
White	35 (0.60)
Hispanic	9 (0.16)
Asian	11 (0.19)
Black	2 (0.03)
Multiracial	1 (0.02)
Relationship Status	
Partnered	54 (0.93)
Single	4 (0.07)
Diagnosis	
MDD	48 (0.83)
GAD	26 (0.43)
OCD	12 (0.17)
Bipolar Spectrum Disorder	7 (0.08)
PTSD/Trauma	6 (0.07)
Substance Use Disorder	2 (0.03)
Eating Disorder	1 (0.02)
ADHD	2 (0.03)

DISCUSSION

The parent-child relationship is central to perinatal mood and anxiety disorders, however treatment options that address both psychiatric illness and maternal-infant bonding remain limited. Furthermore, attachment-based psychotherapies often require long-term invested care. While the need for longitudinal treatment remains critical to recovery, this study provides evidence that a short-term intervention can facilitate bonding and offer meaningful improvement towards attachment security. Greater statistical power was demonstrated in postnatal bonding (PBQ) as compared to adult attachment (AAQ) which suggests that improvements in bonding between mothers and their children were more probable than changes in mothers' attachment security.

Limitations

This study provides preliminary data, however further research is needed to better qualify the efficacy of the perinatal PHP as an intervention. The lack of a distinct control group limits our ability to draw conclusions as compared to other treatment modalities, such as outpatient or inpatient settings. While the AAQ and PBQ capture the consciously held beliefs of the mother, the use of self-report measures introduce inconsistencies among users such as biases and misinterpretation.

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