The impact of childhood maltreatment on depressed adults receiving IV ketamine: A replication study

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BACKGROUND & STUDY AIM

We previously showed that clinically significant childhood sexual abuse, physical abuse, and cumulative clinically significant maltreatment on multiple domains (maltreatment load) was associated with better treatment response to ketamine treatment as well as a higher remission rate among depressed adults (N = 63) seeking ketamine treatment in the community[1]. In this study, we aimed to replicate these findings in a new and larger sample of patients (N=189) and hypothesized that self-reported history of childhood maltreatment would associate with a more robust antidepressant response to IV ketamine treatment.

METHODS

Sample: 189 depressed, treatment resistant adult patients receiving at least 3 IV ketamine infusion at a private outpatient ketamine clinic.

Measures & Variables: **QIDS-SR** (depression severity) assessed at baseline and prior to each subsequent infusion; **CTQ[2]** (childhood maltreatment history) assessed at baseline, measures childhood Sexual Abuse, Physical Abuse, Physical Neglect, Emotional Abuse, Emotional Neglect; *Maltreatment Load* refers to the total number of domains patients met previously established cut score[3] for clinically meaningful trauma in that domain

DISCUSSION

- Consistent with our previous findings, and with ketamine's ability to block early–trauma related behavioral sensitization (**Fig 4**) in patients with treatment resistance[4], patients who report significant childhood physical abuse histories may especially benefit from IV ketamine treatment.
- Given lower likelihood of response to first line treatments[5,6], ketamine treatment may be a good treatment consideration for severely depressed patients reporting significant childhood trauma histories.
- Future research should address the impact of other factors, including substance abuse and more recent trauma experiences, and whether cumulative trauma across the lifespan may also factor into ketamine antidepressant treatment response.

RESULTS

Table 1. Patient Demographics & Clinical Data (N=189)

	Mean / N	SD / %
Female	100	52.1%
Age	40.68	13.9
Baseline QIDS-SR[1]	17.76	3.8
QIDS-SR change over time	-7.7	5.1
Number of infusions	3.77	0.4
Diagnoses		
MDD	155	82.0%
Bipolar Disorder	33	17.5%
Anxiety Disorder	103	54.5%
PTSD	32	16.9%
ADD	12	6.3%
Pain Disorder	6	3.2%
Treatment Responder[2]	76	39.7%
Treatment Remitter[3]	35	18.5%
Maltreatment Load[4] = 0	58	30.7%
Maltreatment Load = 1	29	15.3%
Maltreatment Load = 2	27	14.3%
Maltreatment Load = 3	25	13.2%
Maltreatment Load = 4	28	14.8%
Maltreatment Load = 5	22	11.6%

[1]QIDS-SR: Quick Inventory of Depressive Symptomatology–Self Report (Min=0-5; mild=6-10; mod=11-15; severe=16-20; very severe=21-27)
[2] >50% reduction in QIDS score from baseline
[3]QIDS-SR score < 6
Maltreatment Load (0-5) = sum of scales ≥ clinically significant cut score

Fig 1. Original & Replication Study Response Rates

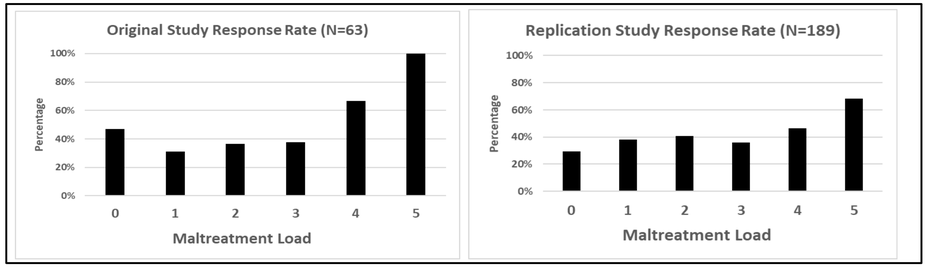
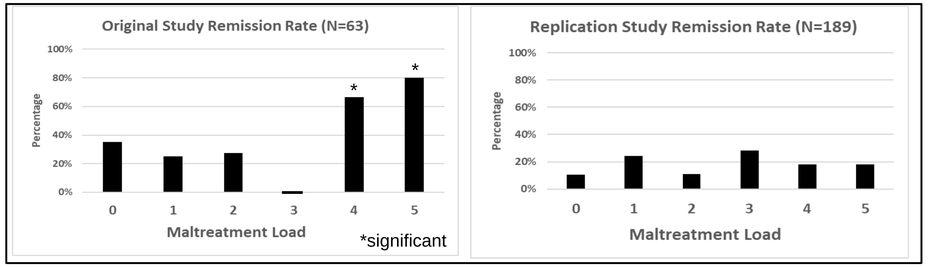


Fig 2. Original & Replication Study Remission Rates



- There were significant relationships between a larger decrease in QIDS-SR from baseline to the fourth assessment with higher CTQ total score (r = .27, p < .001) and higher scores on all five subscales (r between .15 and .29) (**Fig 2**)
- Unlike our first study, GLM revealed that the change in QIDS-SR score reduction was affected by childhood emotional abuse, emotional neglect or physical neglect (Time X Neglect interactions F < 5.37, p < .007) with a stronger decrease in patients with more severe maltreatment.
- The studies did not statistically differ in terms of QIDS-SR change and CTQ domains (**Fig 3**)

Figure 2. Treatment Response (≤ -0.5 equating to at least 50% improvement)

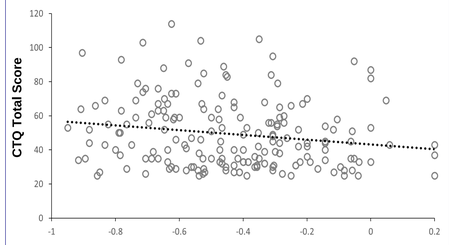


Figure 3. Between-study Differences in Correlation between QIDS-SR Change and CTQ Scales

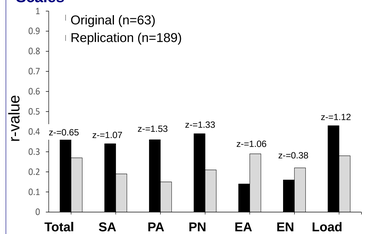
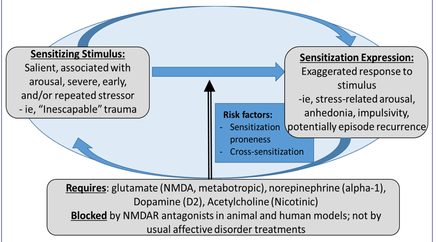


Figure 4. Behavioral Sensitization [4,7,8,9]



ACKNOWLEDGEMENTS & DISCLOSURES

Drs. O'Brien, Lijffijt, Wells, Murphy, Ramakrishnan, and Ms Karpe, Nguyen and Yan report no financial relationships with commercial interests. Dr. Swann is supported in part by the Linda and John Griffin Professorship in Psychiatry and receives grant support from the American Foundation for Suicide Prevention. Dr. Mathew is supported in part by the Marjorie Bintliff Johnson and Raleigh White Johnson, Jr. Chair for Research in Psychiatry.

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