

# Associations of Eating Disorder Traits, Interoceptive Awareness, Gentle Touch with Depression during Pregnancy



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Please help if you can!

## BACKGROUND

- Pregnancy is a major, sometimes stressful event in a woman's life, especially for those who suffer from Eating Disorders (EDs). The accompanying weight gain and change in body shape can lead to recurrence or worsening of the ED (Fairburn, Stein & Jones, 1992).
- Women with EDs are also at increased risk of postnatal depression, which in turn has both short and long-term consequences for maternal mental health and wellbeing (i.e., impact the child and the broader social network including off-spring addiction in later life as a result of maladaptive maternal care; adaptations in the reward-pathway and attentiveness of mother, Nephew, Murgatroyd, Pittet, & Febo, 2015).
- Prior investigations in (non-pregnant) anorexics have found atypical pleasantness ratings in receiving and predicting of gentle touch across various body sites (Bischoff-Grethe et al., 2018; Crucianelli et al., 2020).
- Affective touch, a pleasant interoceptive stimulus associated with activation of the C-Tactile afferents (CTs) is imperative for bonding experience with the fetus (Brauer et al., 2016) and might mediate the relationship between EDs symptoms and maternal depression.

## AIM

We investigated the contribution of EDs symptomatology, Interoceptive awareness and pleasantness to gentle touch, to levels of depression during pregnancy

## METHODS

### Participants

91 pregnant women – N=31 final sample (Mage=27.77, SDage=5.48) Qualtrics (online survey)  
No history of neurological/psychiatric/ eating disorders/ skin/chronic pain conditions.

### Gentle Touch Videos

'How much would you like to be touched like that?'  
VAS: 0: Not at all/100: very much) on 2 body sites,  
3 velocities (0cm/s, 5cm/s & 30cm/s)



### Self-report Measures

1. BUMPs - Body Understanding Measure for Pregnant Scale (Kirk & Preston, 2019)
2. MAIA - The Multidimensional Assessment of Interoceptive Awareness (Mehling et al., 2012)
3. EDI-3 - The Eating Disorder Inventory-3 (Garner, 2004)
4. HADS - The Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983)

### Demographic Information and self-reports scores

	N	Mean	Median	Freq	Min	Max	Std.Dev.
Age	31	27.77	28.00	3	18.00	37.00	5.48
Weeks	31	27.48	31.00	6	11.00	39.00	7.32
PP BMI	31	27.91	26.57	1	17.85	40.12	5.93
C BMI	31	30.30	30.86	1	21.56	43.36	5.63
BUMPS tot	26	55.73	51.00	2	30.00	87.00	18.33
MAIA-N	24	3.24	3.25	5	1.00	4.75	0.85
MAIA-ND	24	2.58	2.67	3	0.33	5.00	1.34
MAIA-NW	24	2.63	2.67	4	0.33	5.00	1.13
MAIA-AR	24	2.45	2.64	5	0.71	4.86	0.94
MAIA-EA	24	3.18	3.50	4	0.00	5.00	1.17
MAIA-SR	24	2.36	2.50	7	0.00	5.00	1.26
MAIA-BL	24	1.75	1.33	5	0.00	5.00	1.30
MAIA-T	24	2.75	3.00	6	0.33	5.00	1.44
EDI-DT	26	9.00	5.50	3	0.00	23.00	7.40
EDI-BDI	26	16.96	16.00	3	1.00	35.00	10.76
EDI-BU	26	6.12	4.50	5	0.00	18.00	5.94
EDI-ID	26	10.08	9.50	4	0.00	30.00	7.36
EDCR	26	32.08	21.50	3	4.00	76.00	21.80
Depression and Anxiety	29	14.31	13.00	4	3.00	27.00	7.45
VF 5cm/s	15	0.23	0.42	1	-2.06	1.90	1.01
PTA_Palm	14	0.23	0.02	3	-0.61	1.59	0.63

## DATA ANALYSES

**Analysis 1:** Bivariate correlations were performed to identify variables which were significantly associated with the dependent variable, depression.

**Analysis 2:** Significant variables were then entered into a linear multiple regression analysis – these included: Body Trusting (Brown et al., 2017; Kirk & Preston, 2019), EDCR and pleasantness ratings for the forearm at CT-optimal velocity.

## PRELIMINARY RESULTS

**MAIA and Depression:** significant strong negative correlations with depression were Body listening,  $r(20) = -.52, p=.010$ ; Trust,  $r(20) = -.55, p=.006$  and Not distracting,  $r(20) = -.53, p=.008$ .

**EDs symptomatology/body dissatisfaction and Depression:** A moderate significantly positive correlation was found between the BUMPs score and level of depression,  $r(22) = .42, p=.021$ . A moderate significant positive correlation was found between the EDRC and level of depression,  $r(25) = .46, p=.010$ .

Table 1: bivariate correlations between the predictor variables; EDRC, BUMPs, Body Trust and CT optimal 5cm/s with Depression

Variable	n	M	SD	1	2	3	4	5
1. Depression	26	6.04	3.75	—				
2. Trusting	22	2.83	1.43	-.55**	—			
3. VF_5	12	56	35.42	-.36	-.02	—		
4. BUMPs	24	54.10	14.48	.42*	-.88**	-.28	—	
5. EDCR	27	26.78	22.21	.46*	-.80**	-.36	.90**	—

Table 2: Regression Coefficients for predicting Depression

Variable	B	95% CI	$\beta$	t	p
Trust	-4.19	[-7.44, -.94]	-1.60	-2.97	0.018
BUMPs	-.25	[-.53, .02]	-1.18	-2.12	0.67
VF_5	-.08	[-.14, -.01]	-.73	-2.70	0.27

Note.  $R^2 = .64(N=12, p=.04)$  CI = confidence interval for B.

The regression model was a significant  $[F(3, 8) = 4.43, p=.035]$ . Both BUMPs and response to affective touch did not predict depression. However, MAIA-Trusting did.

## CONCLUSIONS

- Women who are less positive about the changes in their body during pregnancy, who are at higher vulnerability to EDs are more likely to have higher levels of depression.
- Trusting in the body to grow and nourish the foetus and that the bodily changes occurring at this time are a necessary and important part of that process, may perhaps prevent developing post-natal depression by helping women to successfully adapt to these changes and maintain a positive experience of the body during pregnancy.
- Pleasantness for gentle touch during pregnancy seems not to be related to levels of depression BUT a bigger sample is needed.

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