



BACKGROUND

- Affective touch, a pleasant interoceptive stimulus associated with activation of the C-Tactile afferents (CTs) and the Insula Cortex (Morrison et al., 2011), is imperative for social communication and development (Brauer et al., 2016).
- Due to anorexics' anxiety and discomfort towards touch (Arcelus et al., 2014), prior investigations have found reduced, atypical pleasantness ratings in receiving and predicting of pleasant touch across various body sites, particularly weight sensitive regions (Bischoff-Grethe et al., 2018; Crucianelli et al., 2020) avoid touch from others both from known and unknown individuals (Zucker et al., 2013).
- Thus, altered responses to gentle touch, may contribute to the aetiology and maintenance of psychiatric disorders characterised by body image disturbances (BIDs), including Anorexia Nervosa.

AIM

We investigated whether individuals reporting high vs. low BIDs differ in their perceived acceptability of social touch when delivered to different body areas from a loved one compared to an acquaintance.

METHODS

Participants

Study 1: 31 participants both male (n= 14) and female (n= 17) with high vs. low risk Body Image Disturbances (BIDs) ($M_{age}=30.81$, $SD=14.69$).

Study 2: 28 participants both male and female with high (n= 12) vs low BIDs (n= 16) ($M_{age}=27.62$, $SD=6.43$).

Task

Participants completed heatmaps of full-body virtual avatars to indicate the body regions they find pleasant/unpleasant to be touched by a loved one vs. an acquaintance (stranger).

Self-report Measures

EDI-3 questionnaire measured BIDS risk using the composite score, **Dysmorphic Concern Questionnaire** assessed dysmorphic concerns, the **Touch Experiences and Attitudes Questionnaire (study 2)** examined social touch experiences from various individuals such as an intimate partner and family and friends and the **Social Touch Questionnaire (Study 1)** assessed behaviours and attitudes towards social contact.

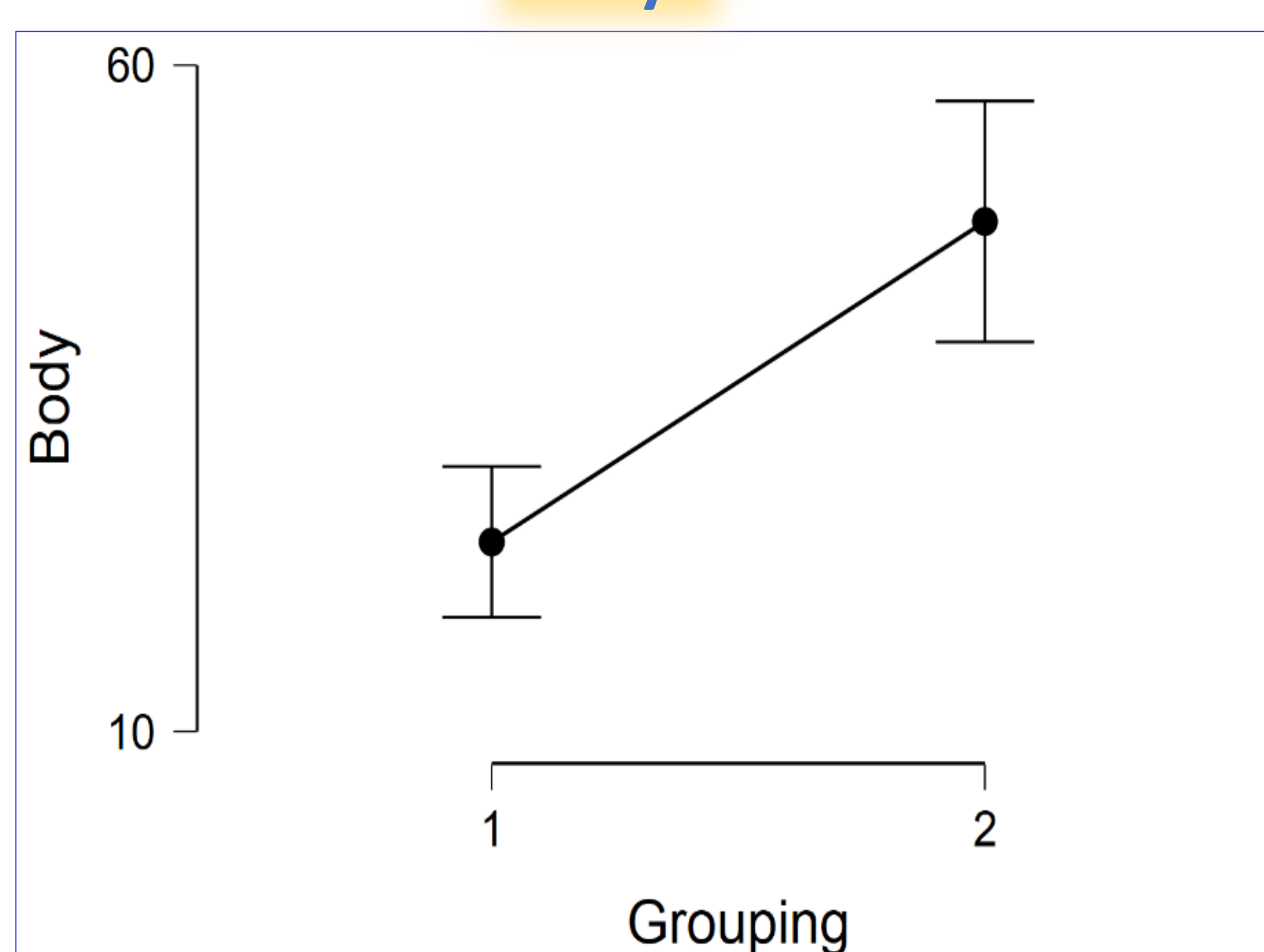
ONLINE STUDY

VIRTUAL TOUCH TOOLKIT



RESULTS

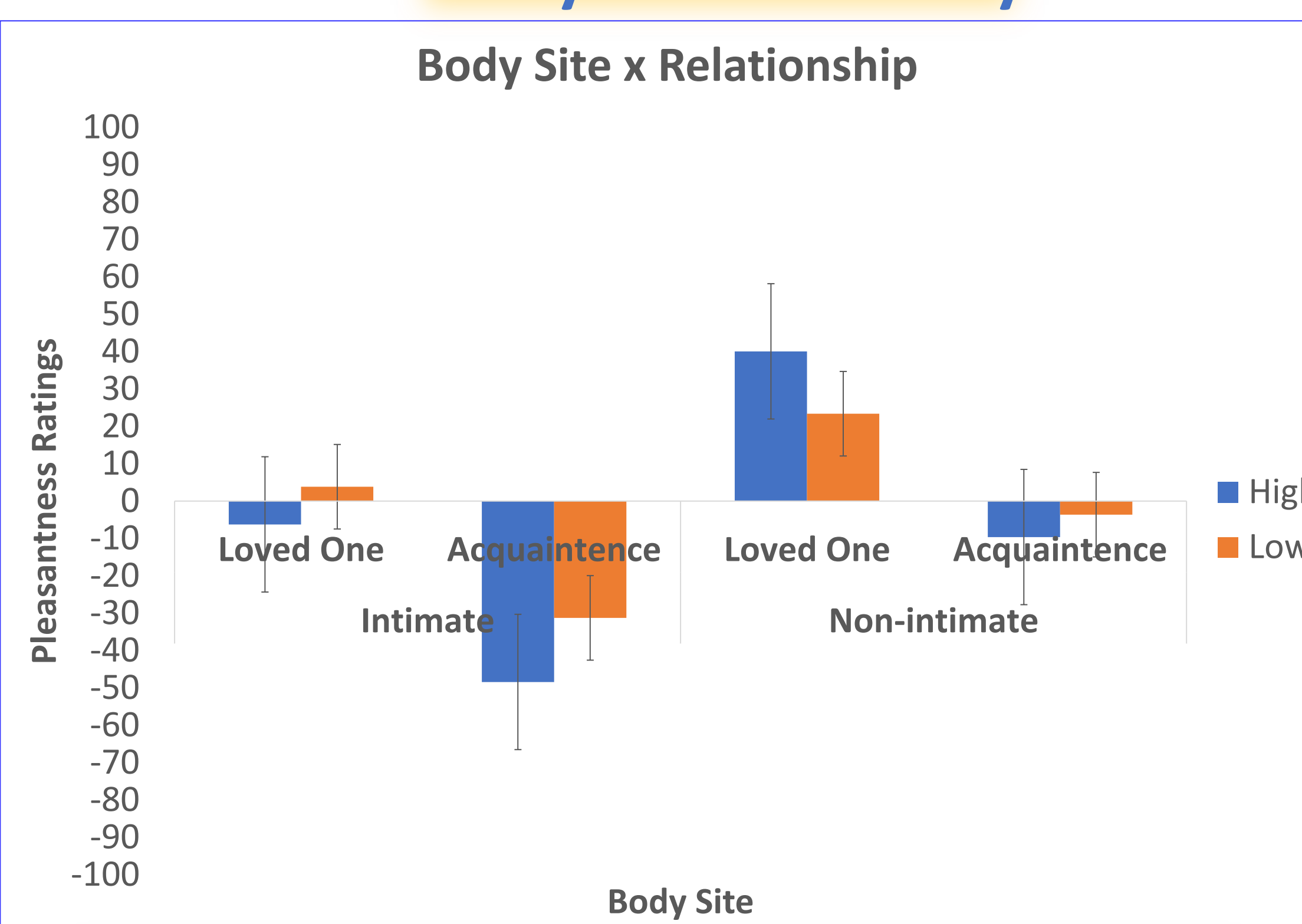
Study 1



As shown in the graph above, high risk BIDs (Group Code: 1) rate overall touch from a loved one as less pleasant ($M= 24.22$) than the low risk BIDs group (Group code 2) ($M= 48.27$).

There is also a significant difference between the comfort of the touch on the *Stomach, Chest and Intimate Area*, with the high risk BIDs group reporting significantly less comfort than the low risk BIDs group ($U = 7306,000$, $Z = -3.648$, $p < .001$).

Study 2- Preliminary



2 x 2 x 2 mixed ANOVA was conducted to assess pleasantness ratings of touch from a loved one vs an acquaintance to intimate and non-intimate body sites, separated by group (High BIDs vs Low BIDs). Results revealed a significant main effect of Body site [$F(1, 26) = 37.59$, $p < .001$, $\eta^2 = .59$] and a significant main effect of Relationship [$F(1, 26) = 13.84$, $p = .001$, $\eta^2 = .35$]. No interactions were significant ($all ps > .065$).

More positive attitudes to intimate touch was positively associated with higher pleasantness of touch from a loved one for high risk BIDs ($r = .668$, $p = .018$) and also for low risk BIDs ($r = .506$, $p = .045$). Childhood touch was positively associated with touch from an acquaintance ($r = .515$, $p = .042$).

CONCLUSIONS

- Overall, touch from a familiar person was more pleasant. Despite this, touch was evaluated as less pleasant, specifically for a loved one from individuals with high BIDs compared to low BIDs, with areas such as the stomach, chest, thighs and intimate parts being rated as most unpleasant.
- Individuals with high BIDs avoid and find touch unpleasant regardless of who they are touched by, particularly for weight-sensitive body regions.
- In future, the Virtual Touch Toolkit may prove a useful intervention tool for improving BIDs and gentle touch experience in disordered eating.

REFERENCES

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