

The Virtual Touch Toolkit: Association with body image disturbances and responses to interpersonal touch, as measured by the ‘HandsOn’ application

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Background: Altered responses to gentle touch, a pleasant interoceptive stimulus associated with activation of the C-Tactile system, may contribute to the aetiology and maintenance of psychiatric disorders characterised by body image disturbances (BIDs), including Anorexia Nervosa. Here, we asked whether individuals reporting high vs. low BIDs differ in their perceived acceptability of social touch when delivered to different body areas.

Methods: Using the ‘Virtual Touch Toolkit’, a newly developed smartphone application, 31 participants ($M_{\text{age}}=30.81$, $SD=14.69$) 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. Self-report measures of eating disorder risk, dysmorphic concerns and social touch experiences were also collected.

Results: Overall, touch from a familiar person was more pleasant. Despite this, touch was evaluated as less pleasant for individuals with high BIDs compared to low BIDs, with areas such as the stomach, chest, and intimate parts being rated as most unpleasant.

Conclusions: 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.