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Interpersonal functioning in Hoarding Disorder: An examination of attachment styles and emotion regulation in response to interpersonal stress

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ABSTRACT

Hoarding disorder (HD) is characterised by strong emotional attachment to possessions, which may be a way in which HD sufferers compensate for problematic interpersonal relationships. Attachment difficulties and intense, dysregulated emotions have been associated with hoarding in nonclinical and clinical samples. The specificity of these problems to HD, however, is unclear. We contrasted self-reported attachment style and emotion dysregulation in a HD group (n = 24) to healthy (n = 26) and clinical (n = 22) control groups. We also compared in vivo emotional and physiological responses of the three groups to an interpersonally-based recall stressor task. Our findings indicated that individuals with HD reported greater attachment-related anxiety and avoidance and more emotion regulation difficulties than healthy, but not clinical, controls. For the stressor task, the hoarding group reported more intense negative emotions than the healthy group and a slower rate of emotional recovery than the clinical control group. No differences were observed among groups in physiological response to the stressor task. Our results support proposed interpersonal and emotion regulation difficulties in HD, but provide very limited evidence of increased difficulties relative to other emotional disorders.

1. Introduction

Hoarding disorder (HD) is characterised by discarding difficulties, which result in excessive clutter that interferes with the use of living areas and leads to substantial impairment and distress (American Psychiatric Association, 2013). HD affects 2.3–5.8% of the population (Timpano, Exner et al., 2011) and places a tremendous burden not only on the individual, but also on their family and the community (Drury, Ajmi, Fernandez De La Cruz, Nordsletten, & Mataix-Cols, 2014; Steketee, Frost, & Kim, 2001; Tolin, Frost, Steketee, & Fitch, 2008). HD is associated with interpersonal conflict (Tolin et al., 2008), low rates of marriage (Frost, Steketee, Williams, & Warren, 2000; Grisham, Steketee, & Frost, 2008), and social isolation (Samuels et al., 2002; Steketee et al., 2001). Cumulatively, these findings have fuelled speculation that individuals with HD have difficulty connecting with other people.

The dominant cognitive-behavioural model of hoarding proposes that individuals with hoarding difficulties form intense emotional attachments to their possessions, to the extent that they may perceive their possessions as extensions of themselves (Frost & Hartl, 1996; Frost, Hartl, Christian, & Williams, 1995) and/or love some possessions in the same way that they would love certain people (Frost & Gross, 1993). They may ascribe human-like qualities to their possessions (Neave, Jackson, Saxton, & Hönekopp, 2015; Timpano & Shaw, 2013) and view discarding possessions as equivalent to the loss of a close friend (Frost & Hartl, 1996). Many decades ago, Fromm (1947) proposed that individuals with HD form attachments to objects in lieu of attachments or relationships with people. In support of this notion, HD individuals report utilising their possessions as a source of emotional comfort (Frost et al., 1995) and report higher levels of interpersonal difficulties compared to community, but not clinical, controls (Grisham et al., 2008).

One way in which interpersonal functioning may become impaired is via insecure attachment to other people. According to attachment theory, infants form strong bonds to early attachment figures (e.g., their mother) and seek to maintain proximity to attachment figures that can offer protection, safety, support and emotional comfort (Bowlby, 1982; Mikulincer, Shaver, & Pereg, 2003). When an attachment figure is repeatedly unresponsive or unavailable, infants can develop an insecure emotional attachment to them (Ainsworth, 1964, 1979), which may endure throughout adulthood (Fraley, 2002). Adult insecure attachments manifest as either attachment anxiety or attachment avoidance (Lowell, Renk, & Adgate, 2014). Attachment anxiety refers to the tendency to fear abandonment and rejection in relationships and to use

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compulsive strategies to draw people close. Attachment avoidance, on the other hand, refers to the tendency to fear intimacy and to feel uncomfortable with dependency in relationships and to routine avoidance of interpersonal relationships (Fraley & Vicary, Brumbaugh, & Roisman, 2011).

Medard and Kellett (2014) found that individuals who hoard experienced greater attachment anxiety and attachment avoidance compared to student and community controls, although only attachment anxiety predicted greater hoarding severity. More recently, Neave, Tyson, McInnes, and Hamilton (2016) found that anxious attachment was a significant predictor of hoarding behaviours and cognitions in a nonclinical sample. Object attachment may therefore be a substitute for interpersonal attachment for those with an anxious attachment style (Norris, Lambert, Nathan DeWall, & Fincham, 2012). Perhaps because relationships with objects seem less threatening, individuals with hoarding difficulties may prefer to derive emotional support from their possessions rather than from relationships with people.

There is also some evidence that individuals with HD lack emotional tolerance and the ability to respond adaptively to stress in interpersonal relationships. In a nonclinical sample, Phung, Moulding, Taylor, and Nedelijkovic (2015) found that when controlling for depression and age, sensitivity to anxiety and engaging in rash actions to alleviate a negative emotional state were significant predictors of hoarding symptoms. Moreover, Timpano, Keough, Traeger and Schmidt (2011) found a link between interpersonal stress and heightened hoarding symptoms, which was partially mediated by emotional intolerance. Finally, Fernández de la Cruz et al. (2013) reported that individuals with HD experience difficulties regulating their emotions compared to healthy controls, although not compared to individuals with OCD. Despite these associations, no research has examined the particular emotion regulation strategies that individuals with HD use in their daily life to influence their emotional experience and expression.

There are important interpersonal ramifications of emotion regulation strategies. Habitual use of expressive suppression is associated with having fewer close relationships and receiving less social support compared to habitual use of cognitive reappraisal (Gross & John, 2003). In order to extend the literature on emotion regulation in HD, we examined the two most commonly studied forms of emotion regulation: cognitive reappraisal, altering one's appraisal of a situation, and expressive suppression, inhibiting the behavioural expression of emotion (Gross & John, 2003; Gross, 2013). Expressive suppression is associated with experiencing fewer positive and more negative emotions combined with an increased sympathetic nervous response, whereas cognitive reappraisal is associated with the reverse pattern (for a review, see Gross, 2013).

2. Aims and hypotheses

Thus, the first aim of the present study was to evaluate whether individuals with HD are more insecurely attached to people and habitually use less effective emotion regulation strategies compared to individuals without a psychological disorder (healthy controls) and to those with another psychological disorder diagnosis (clinical controls). The second aim was to examine whether HD participants had increased emotional and physiological reactivity in response to an interpersonally-based autobiographical stressor task. Regarding these aims, we hypothesised that relative to both control groups, individuals with HD would have greater attachment anxiety and avoidance compared to community and clinical controls, report more general emotion regulation difficulties, and report increased use of suppression and less use of cognitive reappraisal. We also hypothesised that on the stressor task, those in the HD group would exhibit greater negative emotions, worse emotional recovery, and heightened sympathetic response compared to both control groups.

Table 1
Primary DSM-5 Axis I Diagnoses for the Clinical Controls (n = 22) and Comorbid DSM-5 Axis I Diagnoses for the Hoarding Group (n = 24).

Diagnosis	Clinical controls *n* (%)	Hoarding *n* (%)
Depressive disorder (major, persistent, or unspecified)	7 (31.8)	6 (25)
Bipolar or cyclothymic disorder	3 (13.6)	5 (20.8)
Generalised anxiety disorder	17 (77.3)	9 (37.5)
Social anxiety disorder	6 (27.3)	8 (33.3)
Panic disorder/Agoraphobia	6 (27.3)	8 (33.3)
Obsessive-compulsive disorder	4 (18.2)	6 (25)
Post-traumatic stress disorder	2 (9.1)	6 (25)
Other unspecified anxiety disorder	2 (9.1)	0 (0)
Binge eating disorder	0 (0)	3 (12.5)
Bulimia	3 (13.6)	2 (8.3)
Substance use disorder	4 (18.2)	2 (8.3)
Alcohol use disorder	4 (18.2)	3 (12.5)

3. Method

3.1. Participants

Seventy-two participants (hoarding group: $n = 24$; clinical controls: $n = 22$; community controls: $n = 26$) were recruited from the general community via flyers and advertisements in a local newspaper, psychology clinics and online, as well as by contacting individuals who had previously participated in research in our lab. In order to participate in the study, participants were required to either meet diagnostic criteria for HD (hoarding group), meet criteria for another Axis I diagnosis but report no difficulties with acquiring or clutter (clinical control group; see Table 1 for diagnoses) or not meet criteria for any Axis I diagnosis, with the exception of specific phobias (healthy control group). Diagnostic interviews were administered by clinical psychology students in their final year of training and supervised by an experienced clinical psychologist. Individuals who were psychotic, suicidal or homicidal were excluded.

3.2. Materials and measures

3.2.1. The Hoarding Rating Scale-Interview (HRS-I; Tolin, Frost, & Steketee, 2010)

The HRS-I was used to screen for hoarding symptoms via telephone. The HRS-I has been found to have high internal consistency (Cronbach's $\alpha = .97$) and good convergent and discriminant validity (Tolin et al., 2010). If participants were found to be above the clinical cut-off total score of 14, they were invited to participate and their eligibility for the hoarding group was confirmed using the *Structured Interview for Hoarding Disorder* (SHID; Nordsletten et al., 2013). The SIHD is a semi-structured diagnostic interview using DSM-5 diagnostic criteria to assess for Hoarding Disorder.

3.2.2. The Mini International Neuropsychiatric Interview Version 6 (M.I.N.I.; Sheehan et al., 1998)

All participants completed the MINI, a structured diagnostic interview that assesses for Axis I mental disorders using the *Diagnostic and Statistical Manual of Mental Disorders* diagnostic criteria (American Psychiatric Association, 2000).

3.2.3. The Saving Inventory-Revised (SI-R; Frost, Steketee, & Grisham, 2004)

The SI-R is a 23-item self-report measure of hoarding symptoms, with three subscales: Difficulty Discarding, Clutter and Acquisition. Both the SI-R total score ($\alpha = .92$–$.94$) and subscales ($\alpha \geq .80$) have been found to have good internal consistency, test-retest reliability ($r =$