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Health anxiety: Conceptualization and future directions

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Introduction

Health anxiety (HA) is one of several conditions with bodily distress where experiences of physical sensations or symptoms cause excessive discomfort and/or worry and where no adequate organ pathology in terms of conventional medical disease is found to explain the symptoms (Creed, Tomenson, Chew-Graham, Macfarlane, & McBeth, 2018). In the literature, HA usually refers to excessive anxiety about one's present or future health. Contemporary models conceptualize HA along a continuum ranging from mild to severe (Asmundson, Abramowitz, Richter, & Whedon, 2010). However, the term does not exist in the ICD or DSM, and in research, it has been customary to assign severe HA the formal diagnosis of 'hypochondriasis' (American Psychiatric Association, 2000; World Health Organization, 1993).

Hypochondriasis has been subject of considerable debate, one issue being the status of the disorder as an independent diagnostic entity as excessive anxiety about one's health also occurs in some anxiety and mood disorders. This has led to the suggestion that hypochondriasis should be considered a secondary feature of other disorders such as depression, although today this view has largely been abandoned (Scarella, Laferton, Ahern, Fallon, & Barsky, 2016; Starcevic, 2014).

The classification of hypochondriasis has also been debated (Scarella et al., 2016; Starcevic, 2015). Initially, hypochondriasis was categorized as a neurosis, emphasizing that the disorder affected behavior but not the individual's personality or sense of reality (American Psychiatric Association, 1968; World Health Organization, 1974, 1978). The subsequent categorization as a somatoform disorder (American Psychiatric Association, 1980, 1987, 1994, 2000; World Health Organization, 1993) emphasized the clinical presentation of co-occurring medically unexplained physical symptoms and help-seeking in somatic rather than psychiatric settings. More recently, a stronger tie with disorders characterized by high levels of anxiety or obsessive thinking has been emphasized. In the DSM-5 (American Psychiatric Association, 2013), hypochondriasis has been

replaced by two new diagnoses: Illness Anxiety Disorder and Somatic Symptom Disorder and grouped among Somatic Symptom and related Disorders where it is stated that illness anxiety can also be viewed as an anxiety disorder. In the ICD-11 (World Health Organization, 2019), hypochondriasis is classified as an obsessive-compulsive related disorder (OCRD), which is a category of disorders characterized by repetitive thoughts and behaviors (Stein et al., 2016).

Despite changing diagnostic criteria and theoretical approaches, severe HA is consistently identified as *excessive concern* about one's health or a *preoccupation* with the notion that *one has or will get a serious disease* including some degree of *bodily symptoms* that are interpreted as signs of disease or illness. Research has also shown that a key component of HA is illness ruminations (Fink et al., 2004). In this paper, we will present novel research findings to further discuss the conceptualization and phenomenology of health anxiety.

Novel findings

Health anxiety and cyberchondria – does memory have an influential role?

Memories of past illness experiences may be involved in the formation of maladaptive assumptions about symptoms and illness in HA (Warwick & Salkovskis, 1990), especially if they are frequently rehearsed (Rachman, 2012). Likewise, intrusive health-related future thoughts might be formed when patients imagine the negative consequences of feared future health-related events (Warwick & Salkovskis, 1990). In support of the ICD-11's recent inclusion of HA in the OCRD section (WHO, 2019), a recent paper shows that patients with severe HA and patients with OCD retrieved memories and had future thoughts with similar characteristics, e.g. emotionally negative and immersive. However, dramatic differences were found in the content as patients with severe HA remembered and imagined significantly more events related to their own health, disease or death (Gehrt, Frostholm, Obermann, & Berntsen, 2019). These findings add to the debate about

commonalities between HA and other disorders, as they highlight that although similarities clearly exist, thought content specific to disease and illness is likely a discriminative feature of HA (Gehrt et al., 2019; Rachman, 2012; Starcevic, 2014). Furthermore, remembering and imagining illness events was related to maladaptive responses such as rumination and checking one's own body (Gehrt et al., 2019), and could therefore reinforce the excessive concern for own health and contribute to the maintenance of core symptoms of HA. Health-related memories and future thoughts are understudied in HA. However, they may add specific insights about the formation and maintenance of symptoms to current explanatory models of HA and be valuable targets in therapy, as they are likely salient and tangible for patients.

The strong effect of content is also apparent in mental imagery of patients with severe HA (e.g. Muse, McManus, Hackmann, Williams, & Williams, 2010) and may lead to behaviors specific for HA. For example, high levels of HA have been associated with more frequent and longer searches on the internet for health-related information, which are perceived as anxiety provoking (McMullan, Berle, Arnáez, & Starcevic, 2019; Muse, McManus, Leung, Meghreblian, & Williams, 2012). Such distressing excessive online searching has been termed cyberchondria (Starcevic & Berle, 2013). Although cyberchondria and HA are distinct concepts, they are closely related as cyberchondria can be viewed as a type of medical reassurance seeking taking place on the internet. Cyberchondria might represent a more maladaptive and less predictable type of reassurance seeking initiated by cognitions about health and illness (Starcevic & Berle, 2013) that pose a serious challenge to the future development and treatment of HA (Tyrer, Eilenberg, Fink, Hedman, & Tyrer, 2016).

Health anxiety and psychosis – a "forgotten connection"?

HA alongside abnormal bodily sensations have historically been acknowledged as common in early stages of psychotic disorders as part of anomalous self-experiences (Simon, Borgwardt, Lang & Roth, 2014). Psychotic disorders with predominant HA have been described as 'hypochondriac delusions' (Opjordsmoen, 1988). Such HA-related self-disturbances may be important in the assessment and differential diagnostics of psychosis (Parnas & Henriksen, 2014). Still, HA and bodily symptoms have been almost forgotten and substantially overlooked in the systematic research on psychosis development over the past decades (Jenkins & Röhricht, 2007). In a recent study on subclinical positive psychotic experiences in preadolescents, a specific and robust link between HA and psychosis vulnerability was found (Rimvall et al, 2019). Some research suggests that reducing anxiety might prevent severe mental disorders such as schizophrenia (Hall, 2017). As effective psychotherapeutic interventions directed at HA are available (Cooper, Gregory, Walker, Lambe & Salkovskis, 2017), alleviating HA symptoms might reduce overall psychopathological burden and thereby attenuate the risk of debilitating psychotic disorder in some individuals (van Os & Reininghaus, 2016).

Health anxiety by proxy – an overlooked health anxiety phenomenon?

HA by proxy is a newly introduced term to describe persistent and distressing parental fears about their child suffering from a serious disease that is being overlooked (Lockhart, 2016). The presence of HA for significant others was supported in a recent study on mothers with severe HA and their children (Thorgaard, Frostholm, Walker, Jensen, et al., 2017). Although HA by proxy should not be mistaken for fabricated and induced illness, e.g. Münchhausen by proxy, the exposed children may risk iatrogenic harm due to frequent presentation in medical services despite normal examinations and investigations (Lockhart, 2016; Thorgaard, Frostholm, Walker, Stengaard-Pedersen, et al., 2017). Another important aspect is the potential development of psychopathology

in the children themselves (Wright, Reiser, & Delparte, 2017). Social learning with parental modelling and reinforcement of negative illness perceptions and maladaptive illness behaviours may represent an important mechanism for the transmission of HA, but also other conditions characterized by bodily distress, from parents to offspring. There are now some findings on the potential role of family transmission processes in related areas, such as chronic pain, irritable bowel syndrome and somatoform disorders (Levy, Whitehead, Von Korff, & Feld, 2000; Marshall, Jones, Ramchandani, Stein, & Bass, 2007; Stone, Bruehl, Smith, Garber, & Walker, 2018), but also more specifically in relation to HA (Köteles, Freyler, Kökönyei, & Bárdos, 2015; Watt & Stewart, 2000; Wright et al., 2017). However, more empirical studies on child consequences of being exposed to HA by proxy are needed to improve our understanding of the possible transgenerational transmission of HA and related conditions.

Future directions

There is evidence that the prevalence of HA is increasing (Tyrer et al., 2016) which may partly be explained by more people in the modern world monitoring their own health and to the negative effects of excessive internet browsing on health issues (Tyrer, Cooper, Tyrer, Wang, & Bassett, 2019). Still, severe HA remains a somewhat diagnostic enigma as evidenced by the current debate on how to incorporate the symptoms in the recent versions of the DSM and ICD. Based on the novel findings summarized in this paper, we suggest that future efforts to improve our understanding and conceptualization of HA could be obtained by focusing the assessment on dimensions. This could provide a transdiagnostic approach to explore processes that contribute to HA symptoms like memory and other cognitive factors operating across psychopathological entities such as psychosis, OCD, affective and anxiety disorders. Such an approach could help characterize overlaps with other symptom dimensions and thereby holds promise for a better empirically based

delimitation of HA as a distinct concept and disorder. Furthermore, a transdiagnostic approach could improve our understanding of the variability in the severity, disability and persistence of HA symptoms as well as the identification of developmental, physical and psychological problems related to HA. Although HA is eminently treatable with the best evidence garnered for cognitive behavioral therapy (Cooper et al., 2017), better knowledge regarding these aspects could inspire alternative treatment targets and increase timely detection and prevent chronic illness courses (Olde Hartman et al., 2009) as well as hold promise for treatment of HA by proxy and combined presentations of HA and psychosis.

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