Cyberchondria as an emerging trans-diagnostic digital compulsive syndrome: an updated systematic review and clinical case report

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Background

Cyberchondria (CYB), a term coined by the UK Press in the 1990s [1], represents a poorly characterized syndrome involving the urge-driven tendency to excessively seek health or illness-related information on the Internet. Intended to provide reassurance, searching is thought to end up increasing anxiety and distress, uncertainty and reinforcing CYB [2]. CYB may be differentiated from non-pathological information-seeking by compulsive characteristics [2]. A recent meta-analysis [3] found CYB to be associated with “health anxiety” broadly defined. CYB may even represent a trans-diagnostic digital compulsive syndrome. However, the extent to which CYB contributes to the psychopathology of compulsive and related disorders (OCRD) or other online disorders of behavioral addiction, is not understood.

Aims

We present:
1. One of the first reported cases of a treatment-seeking patient with DSM-5 illness anxiety disorder and CYB.
2. An updated systematic review of the existing literature describing the association between CYB and psychiatric disorders.

Case report

Jamie, a 30 years old male with no previous history of psychiatric disorder, referred himself to a NHS primary care CBT service seeking assessment and treatment.

Approximately 9 month before, shortly after ingesting MDMA, he experienced a panic attack (never had one before).

From that point, he developed intrusive thoughts that MDMA had irrevocably damaged his brain, despite medical reassurance to the contrary.

Having been told that his cousin “hears voices”, he started to obsessively worry he had developed schizophrenia.

He became hypersensitive to and misinterpreted sounds and movements.

He also started to worry his heart rhythm was irregular (both parents have heart disease) and started checking his pulse frequently.

He repeatedly visited the GP, and had two (normal) ECGs.

He attended a counsellor, to help rid himself of the intrusive thoughts, but also looking for reassurance that he does not have schizophrenia.

He also started to research the Internet for information about MDMA-induced brain damage or physical disorders (cyberchondria).

He compulsively visited many different websites and patients’ forums, spending several hours a day, to the extent his work was interfered with.

He found researching made him more sensitive and anxious about somatic symptoms, and increased vigilance, further online-searching and bodily checking, panic symptoms and medical consultation behavior.

He self-medicated with Vitamin D, magnesium, fish oil and multivitamins and reported he was feeling 75% better when he came to our clinic.

However, he admitted this referral was linked to residual medical reassurance-seeking.

On mental state examination, signs of schizophrenia and affective disorder were excluded.

Psychometric evaluation.

Cyberchondria Severity Scale (12 items [4], Table 1): 44/60

Short Health Anxiety Inventory (18 items [5]): 29/54

Obsessive-Compulsive Inventory-Revised (6): 87/22

Internet Severity and Activities Addiction Questionnaire (developed from Young’s Internet Compulsive Disorder criteria [6]): 44/60

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However, there was no consensus definition of CYB, or agreement on epidemiology, sociodemographic and clinical characteristics or associated comorbid diagnoses.

A 33-item scale [7] to quantify CYB severity, shortened to 12-items [4], based on 5 domains (Compulsion, Distress, Excessiveness, Reassurance and Mistrust), has been developed.

CYB was found to co-occur with the presence of health anxiety broadly defined, obsessive-compulsive symptoms, problematic use of the internet and other psychological constructs (intolerance of uncertainty, anxiety sensitivity, pain catastrophizing, metacognitive beliefs).

Psychoeducation and CBT were suggested as possible therapeutic approaches.

Table 1. The Cyberchondria Severity Scale (12 items version; [4])

<table>
<thead>
<tr>
<th>Item</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I notice an unexplained bodily sensation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Researching symptoms or perceived medical conditions online distracts me from work (e.g. writing emails, working on word documents or spreadsheets)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Researching symptoms or perceived medical conditions online leads me to consult with my GP</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. I start to panic when I read online that a symptom I have is found in people with a physical disorders (e.g. a biopsy/a specific blood test)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Researching symptoms or perceived medical conditions online makes me believe the information is true</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I start to worry my heart rhythm is irregular</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Researching symptoms or perceived medical conditions online interrupts my offline social activities (e.g. reduces time spent with family/friends)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Researching symptoms or perceived medical conditions online interrupts my treatment (e.g. reduced dose of medicine,中断的使用)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Researching symptoms or perceived medical conditions online interrupts my exercise/physical activity (e.g. running/biking)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Researching symptoms or perceived medical conditions online interrupts my leisure activities (e.g. hobbies)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. I suggest to my GP/medical professional that I may need a diagnostic procedure (that I read about online)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Researching symptoms or perceived medical conditions online makes me seek health or illness-related information on the Internet</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Results

49 hits: 30 original articles, 5 reviews, 1 case report, 11 other (editorials, chapters, dissertations), and 2 descriptions of RCTs (1 including CBT) both still underway.

Five new studies have been published (>1500 participants) since the most recent review [3].

Studies were exclusively descriptive and cross-sectional with samples recruited from the general population or university students, mainly via online surveys.

No characterization of CYB in clinical samples was found.

There was no consensus definition of CYB, or agreement on epidemiology, sociodemographic and clinical characteristics or associated comorbid diagnoses.

A 33-item scale [7] to quantify CYB severity, shortened to 12-items [4], based on 5 domains (Compulsion, Distress, Excessiveness, Reassurance and Mistrust), has been developed.

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Conclusion

CyB appears a clinically relevant form of compulsive behaviour but research remains in its infancy.

Further studies are needed to understand CYB in terms of definition, clinical features, measurement, relationship with hypochondrosis and other compulsive disorders and therapeutic interventions.

References