The Brown University Child and Adolescent Behavior Letter

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Highlights…

Our page 1 stories look at the possible benefits of adding digital hoarding to a hoarding disorder diagnosis, and the pressure put on trainees by high patient volume in partial hospital programs.

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Monthly reports on the problems of children and adolescents growing up

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Hoarding

Digital hoarding: A new subtype of traditional hoarding disorder?

By Kathrin Renschler and Jennifer Freeman, Ph.D.

Approximately one in 40 adults display hoarding behaviors that are considered pathological (Nordsletten et al., 2013). The central diagnostic criterion is a persistent difficulty getting rid of belongings, independent of their value (5th ed.; *DSM–5*; American Psychiatric Association [APA], 2013). Individuals with hoarding disorder accumulate objects ranging from magazines and paperwork to clothing and sentimental items to containers and packaging such as gum wrappers. Recent research suggests, however, that hoarding behaviors may expand beyond the realm of physical belongings into the digital world. Although a digital subtype of hoarding has long been discussed in the media and various online spaces, academia has only recently started to pay attention to it. The first scientific article published on digital hoarding is a 2015 case study by van Bennekom and colleagues. The authors describe the case of a male patient who hoarded thousands and thousands of digital pictures, mostly of landscapes very similar to each other, on multiple hard drives. Following this seminal case study, several articles have been published in an attempt to better understand and conceptualize the

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Downstream effects of high patient volume pressure on PHPs: A child psychiatry trainee's perspective

By Jeannine Rider, MD

Rhode Island boasts some of the most robust access to specialized child and adolescent mental health care across the country, with one of the highlights being the unique access to various levels of care. Child and adolescent psychiatry applicants from across the country are attracted to the breadth of program variety. In particular, Rhode Island uniquely possesses a significant number of specialized partial hospitalization programs (PHP) for children and teens, some of which are nationally recognized and appeal to patients and families throughout the United States.

The term "levels of care" can be stratified by the following descriptions, from the least intensive to most intensive: outpatient treatment programs (where children and teens are seen for typically less than an hour on a weekly or monthly basis); intensive outpatient programs (also known as IOP, which ranges from 9–15 hours of treatment after school); partial hospitalization programs (where children and adolescents spend the weekdays in treatment and sleep at home); and inpatient hospitalization programs (where kids and teens are monitored 24 hours per day on a locked unit for safety and stabilization.)

The PHP treatment model exhibits many benefits for children and teens, who are in need of intensive treatment and able to maintain safety. PHPs can receive patients as a step-down from inpatient hospitalization or as a step-up from outpatient/IOP. One major advantage of PHP is the ability to treat pediatric patients

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phenomenon of digital hoarding. Using the *DSM-5* diagnostic criteria for (traditional) hoarding disorder as a framework, this article reviews the phenomenology of digital hoarding and how it compares to traditional hoarding.

Difficulty discarding, accumulation

According to the *DSM-5*, hoarding disorder is signified by an ongoing difficulty with discarding personal possessions, regardless of their actual economic or monetary value (APA, 2013). This diagnostic criterion can be directly applied to a digital context as having difficulty getting rid of digital (rather than physical) material. For instance, the male hoarder in the aforementioned case study endorsed difficulty deleting the pictures he had taken even though they were of no actual value (van Beenekom et al., 2015). Individuals may also struggle with deleting various other types of digital belongings such as emails, text messages, screenshots, files, saved social media posts, or browser bookmarks.

To meet criteria for hoarding disorder, this difficulty with discarding must lead to an accumulation of a large number of possessions causing clutter in active living areas (e.g., the bathroom, kitchen, or workplace) to "the extent that the intended use of those areas is no longer possible" (APA, 2013). While digital material does not usually lead to the cluttering of physical living spaces, its accumulation can interfere with the intended use of the digital space where the data are stored. For instance, it can be argued that the digital equivalent of not being able to use the stove or shower due to cluttering is not being able to get a software update due to insufficient storage capacity or no longer being able to receive emails due to a full inbox. Going back to the example of the first-ever case study on digital hoarding, the patient had to use four external hard drives because it was not possible for him to process the pictures on his personal computer anymore given the immense number of photos he was accumulating (van Bennekom et al., 2015).

In a study testing how well the diagnostic criteria of difficulty discarding and accumulation capture hoarding in a digital context, Sedera and Lokuge (2018) were able to show that these two symptoms indeed seem to adequately measure digital hoarding. Moreover, given the exorbitant amounts of digital content that are acquired by individuals on a daily basis, these symptoms are likely to be exacerbated in a digital context. For instance, estimates suggest that every day roughly 333.2 billion emails are sent worldwide and about 100 billion messages are sent on Whatsapp daily (Singh, 2020; Ceci, 2022). Another unique characteristic of the digital world that is assumed to further exacerbate hoarding in a digital context is the seemingly endless availability of storage capacity at a relatively low cost (Sedera & Lokuge, 2018). Whereas the average monthly cost for a 10 by 10 feet storage room in the United States is about $160 (White, 2022), one can purchase two terabytes of cloud storage (which equals around 400,000 photos) for only around $10 a month (see e.g., Apple, 2022). This may contribute to a perceived lack of need to delete digital belongings.

Need to save and emotional attachment

To meet criteria for hoarding disorder, the motivation as to why someone is having difficulty with getting rid of personal items must be a strong need to save the items for the future and/or feeling distressed about discarding them (APA, 2013). Common reasons for this perceived urge to save items include being worried about the loss of relevant information, the loss of something that may be useful in the future, and emotional attachment (Dozier & Ayers, 2014). Sweeten et al. (2018) found that individuals with hoarding behaviors express similar reasons for why they save items in a digital context. For instance, one common barrier to deleting emails and digital files that the authors identified was to keep them "just in case" they contain information that may be important in the future. Related to this worry about deleting potentially important digital information, the authors also found that participants thought it was easier to save items rather than having to do the work of deciding which pieces of data may actually be useful in the future (Sweeten et al., 2018). Given the limited amount of physical space that most individuals have available and considering the previously discussed low cost of digital storage, this finding highlights the unique characteristics of digital hoarding. While some hoarders may accumulate physical belongings for the same reason that it is easier than having to deal with deciding which items to discard, the cost of doing so is likely higher compared to a digital context. In other words, a lack of necessity to discard may exacerbate a perceived need to save items in a digital context (and increase avoidance behaviors).

When it comes to worries about the loss of something that may be of use in the future, one interesting finding of Sweeten et al. (2018) was that some individuals hoard digital material to have proof of a task they carried out. This seems to be particularly the case for emails in a work context. Even though it was not for the purpose of saving evidence, the patient in the case study was also worried about losing something that may be useful to him in the future. Specifically, he was convinced that he would be able to merge his photos using newly available technology in the future and could then publish them (van Bennekom et al., 2015).

Emotional attachment, another common motivation for traditional hoarding, also seems to apply in a digital context. For instance, in a study looking at the image-sharing platform Pinterest, it was found that participants felt emotionally attached to the pictures that they had saved on their "digital pinboards" and perceived deleting an image to be as difficult as discarding a physical image (Schiele & Ucok Hughes, 2013). Similarly, Sweeten and colleagues (2018) found that study respondents were particularly attached to photos as well as emails from friends and family. The two main reasons that the authors identified for why individuals were emotionally attached were feelings of comfort and emotional support as well as a fear of losing a part of one's own identity when deleting such items. These findings are reflective of prior research conducted by Cushing (2013) showing that digital possessions can be perceived as a digital extension of the self, representing one's identity.

Distress and impaired functioning

Given the low cost and abundant availability of digital storage capacity and considering that accumulating digital items is unlikely to interfere with physical living areas, it could be argued that digital hoarding is less problematic than physical hoarding. However, this perspective does not take into consideration the final

diagnostic criterion that needs to be present in order to diagnose hoarding disorder: distress or impaired functioning that is caused by hoarding behaviors. Even though it doesn't involve cluttering of living spaces, digital hoarding can equally cause both of these negative consequences. For instance, taking one final look at the case study, the patient described by van Bennekom and colleagues (2015) was feeling highly distressed because it took him up to 5 hours a day to organize the photos across his various hard drives which included making back-ups on four additional, separate hard drives. Moreover, it disrupted his sleep cycle and got in the way of his daily functioning in that it prevented him from cleaning his house or spending time outside. While the presentation in the case study is a rather extreme example, Sedera and Lokuge (2018) found that digital hoarding behaviors in general were strongly connected with personal distress. Moreover, Sweeten and colleagues (2018) found that in some instances digital hoarding interfered with productivity and concentration.

Studies on the recently discovered concept of digital hoarding suggest that affected individuals present with similar symptoms and experience comparable negative effects on their psychological well-being as individuals with traditional hoarding disorder do. While more research is needed to better understand the concept of digital hoarding, this article will hopefully increase awareness of digital hoarding behaviors as a potential symptom of traditional hoarding

disorder as well as other disorders such as obsessive-compulsive disorder. It seems particularly important to be aware of and pay attention to signs of such behaviors, given that digital hoarding behaviors are less likely to interfere with physical living spaces and are therefore less salient and presumably more difficult to detect for both the affected individual and those around them. This seems even more important to keep in mind when it comes to children and teenagers, considering that hoarding behaviors are historically already more difficult to detect in this age group due to the involvement of parents (Storch et al., 2011).

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while they are still regularly exposed to their home environments. This allows for daily, real-time integration of family-based treatment and interventions, which is in contrast to inpatient hospitalization, where some pediatric patients do not elicit the same concerning behaviors exhibited at home due to the vast difference in structure and environment. When a child does not exhibit concerning behaviors on the unit, the treatment team is limited in its ability to offer meaningful family-based interventions.

Unique perspective of trainees

As child and adolescent psychiatry trainees, we have the unique opportunity to immerse in the cultures of different programs across various levels of care for 1–2 months at a time, and we have the unique perspective of witnessing how high pediatric psychiatric patient volume affects the department within the hospital system as a whole. In the first year at Brown, our child psychiatry rotations begin with children and families in crisis, including rotations in the Pediatric Emergency Service, Consult/Liaison Services (treating children awaiting transfer to inpatient psychiatric floors), Crisis Clinic (treating patients discharged with 48 hours from the emergency room), and multiple inpatient hospital program rotations

(Adolescent Inpatient Unit, Child Inpatient Unit, and Center for Autism and Developmental Disabilities Unit).

The COVID-19 pandemic and National State of Emergency in Children's Mental Health has directly impacted these services through increases in number of pediatric patients presenting to the emergency department for psychiatric evaluation, and in turn increased admissions to psychiatric inpatient floors. Due to high demand for inpatient psychiatric beds, a significant number of pediatric patients must wait until an inpatient psychiatric bed is available, and they will await the transfer in the medical hospital. This transfer wait time has increased with high patient volume. During the peak high patient volume months last year at Hasbro