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# Social networking online to recover from opioid use disorder: A study of community interactions



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#### ARTICLE INFO

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#### ABSTRACT

*Background:* Social media has increasingly become a venue for health discourse and support, particularly for vulnerable individuals. This study examines user-generated content of an online Reddit community targeting individuals recovering from opiate addiction. *Methods:* 100 Reddit posts and their comments were collected from the online community on August 19, 2016. Posts were qualitatively coded for opioid use disorder (OUD) criteria as outlined by the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, as well as other common themes. Comments were coded for expression of distinct therapeutic factors (i.e., instillation of hope, universality, imparting information, and altruism). All posts and comments were coded for addiction phase of the author (i.e., using, withdrawing, recovering).

*Results:* 73 unique usernames authored the 100 posts. Among the 73 usernames, 33% (24/73) described enough symptoms in their posts to meet *DSM-V* criteria for OUD (16/73 or 22% mild severity, 7/73 or 10% moderate severity, and 1/73 or 1% high severity. Among the 100 posts, advice was requested in 43% (43/100) of the posts and support was sought in 24% (24/100) of the posts. There were 511 comments made on the 100 posts, nearly all of which contained at least one distinct therapeutic factor (486/511, 95%) with altruism being the most common (341/511, 67%).

*Conclusions*: This research provides validity to the supportive content generated on an online recovery-oriented community, while also revealing discussions of self-reported struggles with OUD among group members. Future research should explore the feasibility of incorporating social media-based peer support into traditional addiction treatments.

#### 1. Introduction

The current opioid epidemic in the U.S. is being described as the "worst drug crisis in American history" (Nolan and Amico, 2016). From 1999–2015, the rate of opioid overdose deaths tripled from 16,849 to 52,404 annually, and the prevalence of opioid use disorder (OUD) likewise is continuing on an ascending path with an estimate of 35 million people abusing opioids worldwide (Rudd et al., 2016; United Nations Office on Drugs and Crime, 2017). Substance use disorders are extremely maladaptive and difficult to overcome. Many individuals struggle with overcoming opioid abuse due to the intense withdrawal symptoms that occur when opioid use is discontinued that may include dysphoric mood, nausea or vomiting, fever, insomnia and/or muscle aches among others (American Psychiatric Association, 2013). Accordingly, relapse from opioid abstinence is common and makes the

necessity for accessibility to OUD treatment vital for many to experience success in their recovery (Gustin et al., 2015; Martin et al., 2007).

#### 1.1. Treatment for opioid use

Effective treatment of OUD has been identified as a national priority to reduce the rates and societal costs of individual disability associated with OUD, the infectious disease burden associated with intravenous opioid use (especially hepatitis C [HCV] and HIV transmission), escalating rates of accidental opioid overdose deaths, and pediatric opioid ingestions (Office of National Drug Control Policy and US Executive Office of the President, 2011). There are many different forms of treatment for OUD, with the most common forms being pharmacologic therapy (e.g., Methadone Maintenance Therapy (MMT), Buprenorphine, Clonidine, Lofexidine), evidence based psychosocial

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interventions, cognitive behavior therapy, dynamic psychotherapy, aversion therapy, psychosocial therapy, group therapy, and Narcotic Anonymous (NA) groups (Bart, 2012; Dixon, 2017). However, only a minority individuals with OUD seek out or receive treatment (Jones et al., 2015), and further lowering the likelihood of recovery is that the treatment that is available often lacks structural support (i.e., social connectedness, or embeddedness in a social network) which is necessary for success (Havassy et al., 1991; Saloner and Karthikeyan, 2015; Wasserman et al., 2001).

#### 1.2. Groups online for substance use

In the setting of low engagement in traditional treatment options. some opiate users turn to social media for health-related information and peer support (Day et al., 2013). Online social platforms, including web forums, allow individuals to freely share their experiences, post questions, comments, and opinions; it can also provide a very rich source of unsolicited self-disclosures of drug use behaviors (Holt-Lunstad et al., 2010). Studies have shown that for individuals struggling with addictive behaviors, online peer support groups provide an open forum for discussion while minimizing perceived barriers and stigma (De Choudhury and De, 2014). Indeed, Morahan-Martin and Schumacher (2003) found that isolated individuals were more likely to be disinhibited and engaged online as opposed to when they were in face to face communication. Social media has the resources to provide an interactive platform between individuals who desire cessation from their opioid use or are currently recovering from their opioid use. However, social media has never been studied as a platform for individuals to express symptoms of OUD, risk of relapse, issues with cessation, and therapeutic factors among other social media members.

The current study investigates the online content of one relatively large online community (+5000 subscribers) that describes itself as a forum to help individuals who are recovering from OUD. To protect the anonymity of this "Opiates-Focused Forum", we hereafter reference this online community as "OFFopiates". OFFopiates was organically developed (i.e., without hierarchical or overarching control) and exists on Reddit, a free, anonymous, and popular social networking site that is used all around the world but primarily in the US. In consideration of emerging evidence about social media as an online and accessible tool to potentially support individuals during recovery, we performed a content analysis of OFFopiates. Specifically, we aimed to understand the social networking occurring on OFFopiates by qualitatively coding the online questions/comments posted by its subscribers as well as the follow-up, subsequent responses that those subscribers received from other individuals within this community. To further validate OFFopiates as a community for individuals who are recovering from OUD, in particular, we focused a segment of our content analysis on delineating the extent to which the questions/comments posed by its subscribers aligns with the expression of OUD as categorized by the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013).

#### 2. Methods

In this study, publically available Reddit posts were analyzed from *OFFopiates*. The posts are reported without usernames and the wording of the posts are changed for ethical concerns. This study is classified as non-human subjects determination by Washington University's Human Research Protection Office.

#### 2.1. Data collection

Reddit post content is organized with the use of different filter tabs. The first 100 posts under the "hot" tab were collected from *OFFopiates* on August 19, 2016. Posts are filtered to appear under the "hot" tab with the use of a Reddit algorithm which analyzes the time in which the post was submitted and the number of up and down votes the post receives. Reddit users up vote when they like posted content and down when they do not. More recent posts with mainly up votes are ranked higher on the "hot" tab, and are viewed by more people (Reddit, 2015; Salihefendic, 2015). The posts were archived through an online extension of NVivo 10, a qualitative analytic software, called NCapture. The program takes a screenshot of web-based material and transforms the screenshot into a PDF file for easy upload to NVivo. For each post, the post author's username, post content, comment author name, and comment content were recorded. A master copy of the codes was also entered into Research Electronic Data Capture (i.e., REDCap) a secure, online, data-driven database for clinical research for analysis.

#### 2.2. Theme development

#### 2.2.1. Post author characteristics

In order to determine the extent to which *OFFopiates* members selfreported symptoms consistent with OUD, three research team members developed a codebook based on the OUD *DSM-5* criteria. *DSM-5* symptoms of OUD are 1) Opioids taken in larger amounts or over a longer period that was intended; 2) Persistent desire or unsuccessful efforts to cut down or control opioid use; 3) Spending a significant amount of time trying to use, obtain, or recover from opioid use; 4) Cravings, or a strong desire or urge to use opioids; 5) Failure to fulfill major obligations (work, school, or home); 6) Opioid use causes/makes worse social or interpersonal problems; 7) Gives up or reduces important social, occupational, or recreational activities; 8) Uses even in situations that are physically hazardous; 9) Continued use despite a persistent or recurrent physical or psychological problem; 10) Tolerance; 11) Withdrawal symptoms.

Each of the 100 posts was coded for the expression of *DSM-5* OUD criteria. After coding was completed, post authors were classified into a *DSM-5* severity level based on the number of criteria mentioned in the post (e.g., mild severity, 2–3 symptoms; moderate severity, 4–5 symptoms; severe severity, 6 or more symptoms). In the event that one person posted multiple posts, the *DSM-5* criteria were summed across all posts by that username in order to assign a severity level. Similarly, post authors who provided details about their opioid use/sobriety status were classified into currently using (i.e., used opioids within 48 h), withdrawing (i.e., sober  $\leq$  30 days), or recovering (i.e., sober > 30 days) from their opioid use. These categories were based on similar classifications of addiction phases developed by MacLean et al. (2015).

#### 2.2.2. Post themes

In addition to the *DSM-5* criteria, all 100 posts were coded for the following identified themes 1) Relapse concern (e.g., preoccupation with relapse or inability to maintain sobriety); 2) Redditor mentions seeking help from a medical/health professional; 3) Redditor is seeking advice/support for someone else (i.e., a close friend or partner); 4) Redditor is seeking *support* from other subreddit members; 5) Redditor is seeking *advice* from other subreddit members; 6) Redditor mentions/feels/is worried about a negative physical or mental effect of opioid use (not including withdrawal); 7) Redditor mentions use of other illicit drugs/medications, tobacco, alcohol or marijuana; 8) Redditor mentions opioid source (i.e., family, friends, other who provides the opioid); and 10) Redditor mentions the subreddit is a good resource. Posts could contain multiple themes.

#### 2.2.3. Comments

Comment authors were classified into using, withdrawing, or recovering from their opiates use. As with the post authors, when multiple comments were made by the same username, all mentions of sobriety status across the comments were considered before assigning a classification. Comments were coded for four distinct therapeutic factors commonly found in group therapy, including instillation of hope Download English Version:

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