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# Hashtagging depression on Instagram: Towards a more inclusive mental health research methodology

## Abstract

Heavily used hashtags on Instagram and other platforms can indicate extensive public engagement with issues, events, or collective experiences. This paper extends existing research methods to paint a fuller picture of how people engage collectively with public issues online. Focusing on Instagram content often deemed 'problematic', we develop and test what we call a 'hashtag practice' approach. This approach targets the hashtag #depressed, but also moves beyond it to: a) incorporate the posts immediately preceding and following a root post, b) more inclusively sample content associated with the hashtag to combat filtering bias, c) consider collocated hashtags, and d) draw on contextual cues in the interplay between posts' visual content, captions and profile management. The method shows the prevalence and significance of aesthetic and memetic practices, and caution in embodiment in mental health posts, revealing more diverse forms of engagement with mental health on Instagram than previous research suggests.

## Keywords

Instagram; depression; mental health; hashtags; digital methods; memes.

## Introduction

A search of the hashtag #depressed on Instagram returns more than 12.96 million posts at the time of writing. As with many other topics considered to be problematic for the social media giant, Instagram has trialled different methods for restricting access to posts, including showing only a limited number of 'top posts' rather than all recent posts. This is perhaps in response to the high level of public scrutiny the platform has received in recent years regarding its impact on young people's mental health (Solon, 2018). For example, the UK's National Health Service (NHS) deems Instagram 'the worst [social media platform] for young mental health' (2017) and *The Guardian* asks why it is 'making people so miserable' (Hern, 2018). Conversely, platforms like Instagram have also been studied for their capacity to connect supportive mental health communities (for example, Hendry et al, 2017; McCosker, 2017, 2018). More research is needed to paint a fuller picture of how people engage with mental health issues publicly through social media, particularly on Instagram. Our paper offers a contribution to this growing debate by revealing surprising diversity in how people use the #depressed tag on Instagram. To better understand engagement with this hashtag, we develop a practice-oriented research method. Through this method we show careful management of visibility and identification through #depressed hashtag use, giving us vital insight into users' overall caution in aligning themselves directly with the experience of depression, even as post content conveys a strong 'depressed aesthetic'. When Instagram users do make their depression publicly visible via hashtags, they code their posts and negotiate their identities in a way that might counteract a broader potential to make conversations about mental health – specifically depression – more visible online.

This article extends more common methods of social media research which focus on hashtags as a way of addressing 'issue publics' (when social media users gather around a hashtag to discuss a particular issue) (Bruns and Burgess, 2011; Rambukkana, 2015), and 'ambient affiliation' (when social media users who have never met or interacted become

aligned with one another through a hashtag) (Zappavigna, 2011, 2012, 2018). Our modified hashtag method targets key hashtags, in our case #depressed, but also moves beyond them to a) incorporate the posts immediately preceding and following a root post in a sample set, b) more inclusively sample content associated with the hashtag to combat filtering bias, c) consider collocated hashtags, and d) draw on contextual cues in the interplay between posts' visual content, captions and profile management. By applying this more inclusive *hashtag practices* method, we show that Instagram is not home to unified, managed communities around hashtags like #depressed, but rather these tags act as an expansive, multi-faceted 'semiotic technology' (Zappavigna, 2018), actively dispersing the ways users might connect with others or express themselves visually. Our findings therefore challenge both the idealised and dystopian imaginings of how people engage with mental health content on Instagram, while building on previous work to develop a method that produces knowledge beyond the hashtag (Gerrard, 2018). The paper demonstrates a digital method that can better target high-use hashtags as Instagram's parent company Facebook increasingly restricts API (Application Programming Interface) access to hashtag and user data.

Our analysis reveals that at a surface level Instagram looks entirely dysfunctional as a means of connecting a community around the #depressed hashtag, let alone as a mechanism for providing networked social support. Our instinct might have been to 'clean' this noisy, seemingly irrelevant content from our dataset to ask how people use Instagram to engage in mental health communities, but on closer inspection, the noise in our dataset showed us that only a minority of posts tagged with #depressed seem to explicitly convey aspects of the actual embodied experience of depression. We observed patterns of hashtag use and profile work that include humorous memetic logics (Milner, 2016) nuanced visibility and connective practices through the 'modulation of intimacy' (Lasén, 2015) in response to the issues, aesthetics, and mental health states related to depression; and (3) in this context of sensitive content, stigma and 'noise', we need to rethink what hashtags are, what they do, what people do with them, and how we should treat them as objects of research and indicators of social

media practices and networked publics. The method developed can help existing approaches to Instagram research deal with high-engagement, complex and multi-dimensional hashtag issues like #depressed, and deepens current understanding of mental health content on the platform, while challenging one-dimensional popular accounts.

We begin with approaches to hashtags in social media research before examining their use in studying mental health experiences. This discussion serves to address the methodological issues underpinning current and future research, and establishes our inclusive hashtag practices method. This is followed by analysis detailing the inclusive, nuanced and complicated account of hashtag practices this method reveals for #depressed.

### **Hashtags: From ad hoc issue publics to ‘tags for likes’**

Hashtags are characterised by researchers in a number of ways. Their role, for instance, in political mobilisation has been associated with forms of activism and social movements such as #Occupy or in the Middle East social uprisings (for example, Chaudhry, 2014). They have been understood to entail forms of play, irony or humour; and for individuals, tagging practices enable the codification of social media performance, giving ‘performative statements of the self greater visibility’ (Papacharissi, 2012:2000). Zappavigna (2011:789) sees hashtags as a ‘linguistic marker’ that facilitates search and ‘upscales the call to affiliate with values expressed in the tweet’ (or other social media post), and in this sense hashtags establish an ‘overall discursive space’ (Driscoll and Walker, 2014:1760). In addition to their use in generating ‘ambient affiliation’ (Zappavigna, 2011, 2012), Bruns and Burgess and others have described the role of hashtags in the formation and ‘coordination of ad hoc issue publics’, formed rapidly and in response to social issues, particularly breaking news stories (Bruns and Burgess, 2011:3; Rambukkana, 2015). But are mental health hashtags like

#depressed being used in the same way? Highfield and Leaver (2015) note that hashtags on Instagram are not always used to intentionally contribute to the formation of a public or community, like when a post is tagged with #tired or #longday to enhance the description of an image (see also Rambukkana, 2015:4-5; Bruns et al., 2016). Zappavigna (2018) also discusses this heterogeneity in the range of ideational, interpersonal, evaluative, affiliative and memetic functions of hashtags.

The intention to connect to a larger discursive space or collective is clearly central to much of the functionality of hashtags, but their use is also fundamentally indeterminate. Our attention lies with this indeterminacy. Gerlitz refers to this as social media data's 'multivalence', and its realisation of value in practice (2016:34). One of the problems with hashtags, methodologically, as Gerlitz explains, is that like other social media metrics they create a tendency toward 'commensuration of heterogeneous actions into a single data point' (2017:242). As the research above indicates, and as our paper explores, the heterogeneity of hashtags affects the sense we can make of their use. Disruptive uses of hashtags on Instagram include practices of 'tag jacking' (using hashtags for personal gain or to gain attention) and 'tags for likes'. These practices, which we return to in the analysis below, extract alternative value from participating in a popular hashtag like #depressed, as made explicit by Instagram add-ons like TagsForFollowers.com. In the use of 'risky' hashtags, or hashtags like #depressed, when dealing with stigmatised experiences, the lines are heavily blurred between determined, serious engagement, and disruptive, playful or cautious invisibility practices. The codified management of visibility evident in the use of #depressed on Instagram gives us cause to revise some of the assumptions we have about the work hashtags do and the uses to which they are put.

## **Making mental illness visible on social media**

While it is one of the most prevalent and debilitating mental health issues globally, the experience or phenomenological characteristics of depression remain poorly understood (Cvetkovich, 2012; Ratcliffe, 2015). Ratcliffe (2015) argues that even the diagnostic and clinical guidelines used for assessing depression are self-referencing and heterogeneous in parsing its experiential elements and range of symptoms. Platforms like Instagram, Tumblr and Reddit, as well as dedicated community forums allow the unfurling of the signs, feelings and attributes that express a person's ordinarily stigmatised experiences of mental ill-health. Hence, like other visual platforms, Instagram seems to offer a new kind of access, a new visibility for the lived experience and life-worlds of serious forms of mental ill-health like Major Depressive Disorder (MDD) or more common non-clinical depressive episodes.

Hashtags can be thought of as a vehicle for making social phenomena visible. Drawing on a long history of theories of visibility in social research, Brighenti (2010) argues that visibility – seeing and being seen – can be understood as the very basis of the social. However, visibility is 'inherently ambiguous, highly dependent upon contexts and complex social, technical and political arrangements' (Brighenti, 2010:3). Similarly, Bucher reminds us that while media of all kinds function to 'make visible' by extending seeing and sensing, they also determine our regimes of visibility, with platforms like Facebook algorithmically modulating our capacity to achieve social attention or alternatively be rendered 'invisible' (Bucher, 2012). For #depressed and other stigmatised mental ill-health tags, the modulation and management of visibility is paramount. On a practical level, mental health hashtags have to an extent been used to achieve positive forms of visibility to enable online community support. Examples include #RUOK (are you okay?) Day, and more organic or peer-led community support – as in the cases of #twloha (to write love on her arms, twloha.com), and #projectsemicolon (projectsemicolon.com). Instagram's own campaign initiated in 2017 to encourage social support for mental health issues promoted the hashtag #imhereforyou, but it is not widely used

(returning around 100,000 search results at the time of writing), and often used aberrantly and digressively. Indeed, as these hashtags attempt to replicate, ‘The sharing of personal stories has long been a central strategy of grassroots mental health activism, particularly in struggles against “psychiatric authority”’ (Costa et al, 2012 in Tyler and Slater, 2018:724). But on Instagram, such strategies are far more difficult to control.

Given the amount of content dealing with it, user engagement with depression across social media platforms remains under researched. However there is a growing body of work across the psychological and social sciences focusing on engagement with eating disorders, alongside other forms of self-harm such as cutting on visual platforms like Instagram and Tumblr (e.g., Moreno et al, 2016; LaMarre and Rice, 2017; Brown et al, 2018; Gerrard, 2018; Ging and Garvey, 2018; Seko and Lewis, 2018; Tiggemann and Zaccardo, 2018). These studies offer important insights into how different forms of illness are made visible, particularly through the use of hashtags, or through the circumvention of banned hashtags. Ging and Garvey analyse a sample of pro-anorexia hashtags on Instagram to emphasise their role in ‘mainstreaming’ and normalising disordered eating, but also their role in revealing ‘the normality of body dissatisfaction in young women’s lives’ (2018:1182). Focusing more on the use of hashtags to maintain stigmatised collective action on Instagram, Moreno et al.’s (2017) study of #secretsociety123 – an alternative hashtag used for engaging with pro-anorexia on Instagram and other platforms – shows how hashtags can equally serve ‘counterpublic’ purposes, often because of the hostility of broader publics and the platforms themselves as they instigate bans on particular tags (see also Gerrard, 2018). While these examples shed important light on collective action around specific mental health issues, their focus on curated hashtagged datasets risk unifying collective experiences that are actually more disparate, while missing other, perhaps non-tagged forms of engagement in conversations about self-harm, eating disorders, depression, and similar issues. This absence is precisely why we propose a hashtag practice approach to sampling and analysing social media content.



Much existing research, however, often reinforces the received understanding of hashtags as enablers of communities or publics around designated semantic rallying points. We know by now that people do not always use media technologies in the ways they were intended (Baym, 2010; Bruns et al., 2016), and the presumption that social media users engage with hashtags for therapeutic or supportive reasons alone, or for normalising risky mental health practices and body image ideation, limits our understanding of the relationship between social media and mental health. Ging and Garvey (2018) raise a key methodological issue when looking to account for mental health experiences as they intersect with the visibility affordances of social media. They excluded many posts from their sample that used the #ana hashtag merely to 'gain a wider audience and more attention, as is the case with tags such as #love, #happy, #beautiful and #TagsForLikes' (2018:1186). We argue that, firstly, these divergent or digressive hashtag practices are equally relevant and should not be 'cleaned' in the process of developing datasets; and secondly, they offer important insights into the subversive capacity of 'problematic' social media content. But more than this, we also need to account for the other posts in a users' feed, which may well be untagged, as hashtags are far from the only way people communicate on social media.

### **Research methods: An inclusive 'hashtag practice' approach**

Our aim was to both target and move beyond existing hashtag methods in social media research by developing a more inclusive and expansive dataset to better account for the range of strategic uses and functions of engaging with #depressed. Innovative quantitative methods have been developed to research social media content including natural language processing (NLP) techniques such as topic modelling, or timeseries analysis. Argyrou et al., (2018), for example, uses LDA topic modelling to parse Instagram hashtags in a large dataset in order to

predict image content. But beyond the initial quantitative phase, qualitative approaches are needed to better understand variation in use and explain broad quantitative patterns. A *hashtag practice* method accounts for the multiple ways people engage with a particular hashtag, while enabling analysis that reaches beyond to users' non-hashtagged practices. This involves: firstly, extracting a large sample via one or more hashtags aligned with a topic such as #depressed; secondly, establishing a smaller random subsample; thirdly, adding posts from before and after each subsample post, and fourthly, undertaking profile and account analysis along with post and caption content analysis. There are a wide range of appropriations, adaptations, variations and subtle circumventions associated with #depressed. We begin with and move outward from #depressed as the dominant thematic tag in large part to illustrate and better understand the character of the diversity of hashtag use and non-use.

Using API access via Netlytic.org before it was restricted by Instagram's parent company, Facebook (see Bruns 2019), we extracted a dataset of posts and associated metadata. The initial dataset included 3496 public #depressed posts collected over a 48-hour period between 29 and 30 March 2017. The API call was evenly spaced over that period to balance time zones and locations of posters. From the larger dataset, we pulled out one in 20 to obtain 103 posts, with 92 unique profiles. We then added the two posts before and two posts after those original posts from the source account. A final subsample consisted of 481 posts (some accounts had fewer before and after posts, or the original post had been deleted, and this context was retained rather than 'cleaned'). These posts' image and caption (if added by the user) were imported to NVivo qualitative analysis software to aid subsequent coding and analysis. While this approach can be replicated through manual data collection, care needs to be taken to counter the filtering processes that Instagram's native search introduces. In addition to reaching beyond hashtagged posts, this approach allows flexibility in the process of developing a sample dataset, but aims to avoid 'cleaning' datasets to suit predetermined needs of analysis when capturing seemingly irrelevant but potentially significant post activity.

Our data analysis followed 'abductive' processes (Tavory and Timmermans, 2014), meaning that analysis and theory building involved both inductive and deductive processes, drawing on theories such as those of visibility and hashtag practices, and existing understandings of social media engagement with hashtags and mental health content, in relation to observed patterns in the dataset. The analysis considered consistent patterns along with variation in instances and cases, and categorised types of content and associated hashtag practices to establish three broad themes for more detailed exploration. These themes are not considered to be exhaustive of all engagement with #depressed content, but form the basis of the resulting insights about this particular hashtag at this point in time.

In applying a hashtag practices method, the analysis considers four key elements: a) posts immediately preceding and following a root post in a sample set, b) an inclusive (or not 'cleaned') sample of content associated with the hashtag to combat filtering bias, c) collocated hashtags, and d) contextual cues in the interplay between posts' visual content, captions and profile management. While the relevant contextual cues may differ depending on the subject matter being studied, the analysis that follows examines the image, text (visual as well as captioned), and use of hashtags in relation to emergent themes, as well as associated account types and profile information. The purpose of including posts before and after a root post is to explicitly account for tagging practices (e.g., are tag groups used routinely, or with more discretion; do users tag some posts with #depressed, but not others; are accounts dedicated to topics or more varied in focus etc.).

Most posts were still images, but video posts were included and were viewed during the coding process. Use of Emoji in captions and comments was also considered, but was not a focus in our findings and analysis (we found occasional use of: variations on hearts, faces and sad faces, skull and crossbones, clouds and butterflies among others). A codebook was developed to build explanations for the core categories (Figure 1) drawn from the combination

of visual content, caption and hashtags of the 481 posts. The 92 profiles were coded separately to capture qualities of the user-profiles to determine whether they were ‘dedicated’ accounts focused on certain types of post content, or ‘personal-general’ accounts in keeping with Instagram’s function of enabling personal image sharing among friends. Coding and analysis were undertaken by one member of the team and an additional research assistant, and cross checked by another to verify an acceptable level of intercoder agreement – where agreement on codes was above 85% of coded items (Saldaña, 2015). For the 481 posts, rather than focus primarily on topics or themes as previous studies of mental health hashtags have done, our study explored practices or the ‘functional’ qualities observable in posts. This is in line with and informed by systemic functional linguistic approaches that emphasise both the topics or ideational elements of social media content, and the interpersonal variables and social functions of language (Zappavigna, 2012, 2018; Halliday, 1978).

There are limitations to drawing only on public Instagram posts, particularly for sensitive issues. Notably, our approach does not deal with activity that happens through private messaging, responses to posts, or through ephemeral channels such as Instagram Stories. Future research comparing these modes of engagement would be highly valuable. As our analysis shows, however, the extensive use of dedicated and pseudonymous accounts points to the likelihood that it is in these negotiated ‘public’ uses of Instagram that more explicit engagement with mental health issues takes place. Ethics approval to conduct this research was obtained from Swinburne University’s Human Research Ethics Committee (SHREC). We sought a consent waiver due to the difficulties of either identifying individuals associated with the mostly pseudonymous posts and accounts, and intrusiveness in attempting to contact those posting through comments or direct messages. Our decision to not request informed consent, or use a more intrusive methodology such as interviews nonetheless aimed to safeguard those who might be using the hashtag to self-identify with mental health conditions while better understanding those practices in situ. In our analysis, we treated the data ethically by avoiding direct reference to any identifiable content or information, and by blurring or

redacting any identifying markers in the posts reproduced in this paper. The dataset consists of only all public posts and public accounts, and the large majority are pseudonymous.

## Findings

Whether extracting posts through the API, web scraping or appraising the tag through Instagram's in-platform 'search' and 'follow' tools, posts tagged #depressed are strikingly noisy. At face value, that is, the posts do not appear to connect with the meanings or ideation associated with experiences of depression, or indicate a coherent, unified community (whether supportive or self-destructive). Memes, text quotes, and popular culture references were common in our dataset, alongside inspirational quotes, and the less common embodied personal expressions of mental ill-health. This highlights the multi-faceted and indeterminate practices that surround and often deliberately disrupt coherence in hashtag use. In short, Instagram's #depressed 'community' is fragmented, diverse and overtly *disembodied*. However, as we show in the analysis below, in these markedly varied ways Instagram enables responses to the 'all-pervasive and painful feeling of estrangement from other people that is already so common to depression' as Ratcliffe puts it (2015:28).

Three main types of practices emerged in our analysis of #depressed posts and accounts. The first involved the presentation and circulation of 'inspirational' content in the form of messages of hope regarding mental ill-health and recovery, or the 'sad aesthetic' of negative inspiration (quotes and sentiments that reinforce and express facets of the unhappiness associated with depression). The second set of practices appropriates the hashtag as a memetic device, often with a sense of irreverence, subversiveness and pathos, but in an effort to use the connective power of the popular tag to gain attention and Likes. The third, and perhaps most significant type of practice for our methodological approach, involves

the smaller number of embodied experiences – posts displaying people, bodies/body parts, or selfies, and which belong to profiles containing ‘real name’ information and identification. These posts in our sample were often devoid of hashtags (see Table 1), picked up by our method of reaching beyond the hashtag. They provide examples of the management of visibility and identification in relation to depression as still highly stigmatised and restricted social media content. We explain this further below as likely relating to the platform’s problematisation and moderation of mental health content, and theories that suggest that management of visibility in relation to social status is heightened when it intersects stigma. That is, despite the abundance of selfies and other embodied, first person content on Instagram, this mode of expression is consistently avoided in the use of the #depressed hashtag.

Account management was a standout indicator of the type of post and hashtag practice. There were 92 unique profiles in our original dataset, with some users posting more than once during the data collection period. Some users changed their profile names during the analysis period and this was noted but treated as the same profile. We coded the 92 profiles on the basis of the following criteria: (1) username; (2) profile information (for example, the profile biography, or ‘bio’); (3) profile image; (4) content posted among the root posts (tagged with #depressed); and (5) content posted among the two posts immediately preceding and following the root tag. Using this information, we then sorted the 92 profiles into two broad account types: *Dedicated accounts* (76%) and *Personal-General accounts* (24%). Dedicated account-holders consistently produced dedicated posts around particular themes, whereas Personal-General accounts posted a range of personal material but sometimes included #depressed hashtag use. We further split Dedicated accounts into three sub-categories: (1) Mental Health and Illness, (2) Entertainment, and (3) Self-Help. For the Dedicated accounts, we saw an even split between Mental Health and Illness (46%) and Entertainment (46%), with a smaller amount of Self-help accounts often run by practitioners or advocates (8%).

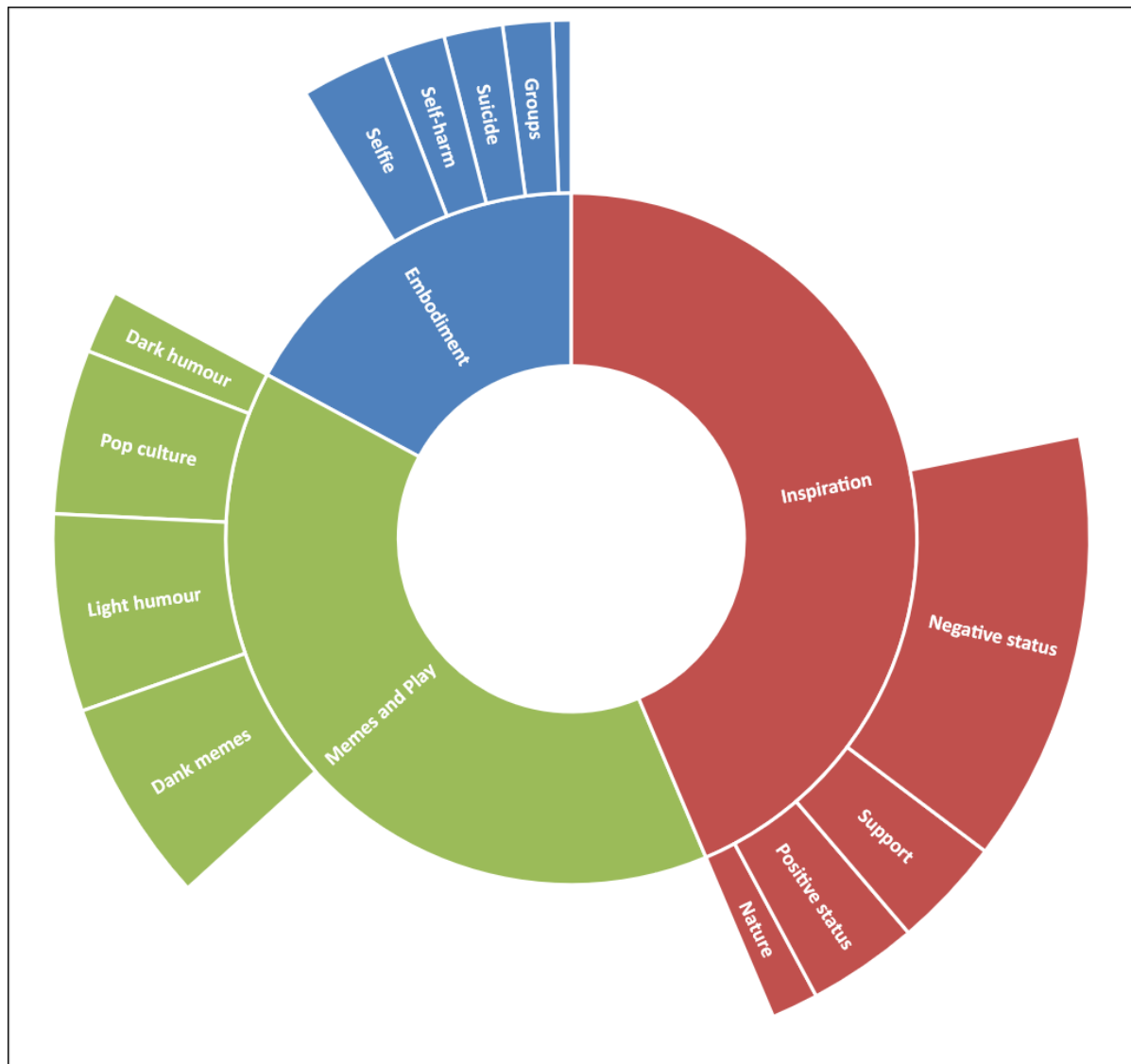


Figure 1: Key themes and sub-themes for #depressed (n=481).

Three broad top-level categories, as illustrated in Figure 1, were identified as follows: 38% of posts were categorised as Inspiration (hope and support, negative status, positive status, nature); 35% were categorised as Memes and Play (dank memes, dark humour, pop culture); and 15% were categorised as Embodiment (body parts, cutting and self-harm, drug and alcohol, selfie, groups). A 'miscellaneous' category was reserved (but not excluded from

analysis) for the range of posts that did not fit one of these major and more common categories and accounted for 12% of posts. These primary categories are explained further in the sections below as they relate to hashtag practices. To understand the hashtag practices associated with each of these major categories, we analysed hashtag frequencies for each category of post. Table 1 lists the top ten collocated hashtags for each category and the number of instances, revealing interesting differences between the three main types of post (see Table 1).

Table 1: Top 10 hashtag word frequency for the three main post categories (n=481).

<b>Memes and Play</b>	<b>Inspiration</b>	<b>Embodiment</b>
#depressed (143)	#depressed (142)	#depressed (28)
#dank (129)	#sad (70)	#sad (23)
#memes (123)	#depression (68)	#suicide (23)
#filthyfrank (121)	#suicide (59)	#cutting (21)
#funny (121)	#love (44)	#depression (20)
#meme (120)	#anxiety (42)	#sadedit (20)
#bushdid911 (119)	#suicidal (41)	#suicidal (19)
#dankmemes (119)	#broken (32)	#anxiety (14)
#anime (116)	#quotes (29)	#anorexia (13)
#cringe (113)	#help (28)	#killme (13)

By looking at how the #depressed hashtag is used on Instagram, and pivoting from it through associated tags, we can see patterns of strategic interpersonal connectivity on the one hand (particularly with memes and play and inspiration) and by contrast, circumvention and disconnection on the other hand. Surprisingly, far fewer posts categorised as Embodied also contained the #depressed hashtag (see Table 1). In fact, many of these posts were not tagged at all. This finding indicates a strength of our inclusive hashtag practices method – that is, collecting other, often non-tagged posts from a user’s account beyond the original tagged



post – and gives us vital insight into users’ overall caution in signalling depression directly when it relates more closely to embodied and real name experiences. The accounts containing Embodied posts were also far more likely to be categorised as Personal-General rather than Dedicated mental health accounts or meme accounts. The remainder of this paper explains these dominant modes of engaging with #depressed, and through #depressed connecting with others, or engaging mental health ideation but through guarded and managed visibility practices or circumvention techniques.

### *Mental health inspiration, sad aesthetics and ambient social support*

The most common category of content in our dataset (38% of coded posts) – mental health Inspiration – is oriented around an aestheticised treatment of the topic of depression. Through pictorial or graphic text messages related to mental health and wellbeing, Inspirational posts express either supportive or recovery-oriented ideals (‘inspo quotes’), but also negative emotions and status in the form of ‘sad quotes’ and ‘sad aesthetics’. Ging and Garvey note a similar finding about pro-anorexia (pro-ana) content (social media posts promoting the worsening of anorexia): they argue that the image-centricity of Instagram as a platform and its built-in editing software has fostered an *aestheticisation* of pro-ana posts consistent with ‘art photography’ and ‘high-end designer fashion’ (2018:1192). Likewise, #depressed posts of this kind adhere to strict aesthetics, while expressing an emotional state or event through words, illustrations, facial expression, settings, gestures or proxy objects (including pop culture references). Overall, but without intending to unify or generalise, #depressed appears dark, aberrant and digressive, with some glimpses of inspiration, self-reflexivity and expressions of social support. Sad quotes are the stylised expression of hopelessness and disconnection that are associated with depression clinically; as exemplified in Figure 2.



Figure 2: An example of a negative Inspiration post and the 'sad' aesthetic.

Aestheticised content of this kind is 'connectable' and consistent, enabling the affiliation capacities associated with hashtag use. Zappavigna calls this kind of communication 'ambient affiliation': how 'virtual groupings afforded by features of electronic text [...] create alignments between people who have not necessarily directly interacted online' (2012:1). Most often, these posts were associated with accounts we categorised as 'dedicated' accounts, set up with the aim of posting a consistent type of material associated with aspects of depression (whether positive or negative). The beauty of hashtags is that they connect people who are not typically connected to each other. The unique aesthetic of #depressed posts that we have uncovered here – along with the aesthetics of untagged posts relating to depression – are easily recognisable, and users who have never communicated before can instantly share their experiences through their tagged posts. Baym explains that online communities are often formed through such shared practices; that is, they can be found in the 'routinized behaviors' that groups members share, and which include 'insider [...] genres, styles, and forms of play' (2010:73).

One account-holder in this category – and who we will not name to protect their identity – posts relatable content such as captioned cat pictures, or ‘inspo quotes’ with phrases like: ‘It is okay to change’ or ‘give yourself time’, always with support links and hotline information in the caption. This account also provides links to a website offering resources for mental health professionals called *Therapist Aid*. While this kind of advocacy is certainly possible following the logic of hashtag use for connecting with #depressed content and searches, the ‘sad aesthetic’ represented in Figure 2 was more common, and thus this user’s attempt to connect to a community not by language or other methods, but by subtle ‘insider’ post aesthetics. An Instagram user would arguably have to be familiar with such an aesthetic to recognise it as belonging to a community of users experiencing and/or talking about depression, similar to the pro-ana post aesthetics identified by Ging and Garvey (2018). Ging and Garvey’s (2018) primary concern is that the aestheticisation of pro-ana content might contribute to its societal normalisation; specifically, the normalisation of extreme thinness as an ideal body type. While their results raise important questions about the normalising potential of social media for content promoting eating disorders, the implications of this kind of aestheticisation relating to depression have very different, perhaps even opposing stakes. That posts belonging to the Inspiration category were so dominant in our dataset (accounting for 38% of the total posts) tells us that Instagram users, in subtle, albeit codified ways, foster some degree of community around mental health. Most notably, however, not only was there much variation in the aesthetic practices associated with the Inspirational content of #depressed, it was only one way of engaging with mental health related content.

#### *Memetic practices: Resonance and complex collectivism*

Mememes, and what Milner (2016) refers to as ‘memetic logics’, are commonplace among the tagging practices and post content (35% of coded posts), indicating that disruptive, provocative or ironic connections play a central part in the use of the #depressed hashtag.

Many posts used hashtags in this way for their interpersonal function of generating connections or affiliation (Zappavigna, 2012). But coupled with the ideational aspects of #depressed, memetic logic emphasises edgy disruption, provocation, and subversion as forms of pathos. This use of the hashtag may be easily dismissed as unrelated to a core experience of depression or its aesthetic expression. However, these posts engage deliberately with depression-related hashtags in a performative and connective sense through provocation, often as a way of pushing content boundaries. In his account of ‘memetic logics’, Milner (2016) notes the use of memes in a range of tactical interventions into public conversation. Similarly, for Zappavigna (2012:101), ‘internet memes are deployed for social bonding rather than for sharing information. Humour is a very common strategy supporting this bonding’. In other words, memes act as a semantic resource and tool for establishing ‘otherness and in-ness’ (Eggins and Slade, 1997; Zappavigna, 2012:103). An example of a meme in our #depressed dataset is shown in Figure 3.



Figure 3: An example of a Memes and Play post.

Despite the seeming disparity between the memes in our sample and the idea and experience of depression, the prevalence of ‘dank memes’ – slang for high quality marijuana (Milner, 2016) – and other forms of dark humour suggests a kind of pathos or ‘sad aesthetic’

as underpinning this interpersonal use of the tag. As one of the dominant associated hashtags, #dank resonates with a set of tagging and posting practices relevant to social explorations of boundaries, taboos and offensiveness. Milner (2016) describes dank memes as a form of meta-commentary or irony levelled at exposing poor or tired jokes along with the boundary work that follows the use of memes in online communities and platforms. In this vein, #filthyfrank, as one of the common associated hashtags, is itself a meme linked to now retired YouTuber George (Joji) Miller (Kelly, 2017). Defined by in-group circulation of ironic, offensive and deliberately shocking content, #filthyfrank draws together memes that achieve a kind of edgework (Lyng, 2004). When connected with #depressed, the hashtag maintains a pathos that also subverts the inspirational mode of other #depressed content. That is, the ironic humour, play and pathos of this kind of memetic content disrupts and disperses the ideational focus of the mental health hashtag #depressed. Dank memes are connective and collective, but in a more jarring and deliberately disruptive way to the Inspiration posts described above.

### *Negotiating the embodied life worlds of #depressed*

Given that Instagram itself marks #depressed posts as 'problematic' by limiting search access to 'top posts' while hiding 'most recent' posts, it is unsurprising that there were fewer posts in our dataset that were visually revealing of embodied mental health experiences (15% of coded posts). We categorised these posts as Embodied: depicting bodies/body parts, selfies, and other kinds of images of people, with some sort of indexical connection to the 'lifeworlds' or embodied experiences of depressed mental health states. These posts are indexical in that they point to, or index, embodied experiences and personal contexts. This theme was most closely related to the ideation and experience of depression, including direct expression of suicidality and self-harm (including cutting), even though many of these self-representations were partial or indirect. Embodied posts were mostly produced from Personal-General accounts, but were significantly less likely to be cross-tagged, or tagged at all (Table

1), calling into question both the platform's current hashtag moderation techniques and also social norms discouraging users from sharing personal expressions of depression. This finding also underscores the usefulness of the hashtag practice approach for identifying and understanding these stigmatised experiences.

Although many of the account-holders posting embodied content were more comfortable revealing their 'real name' than those managing Dedicated meme and other accounts, they went to great lengths to manage – or modulate (see Lasén, 2015) – the association between mental illness and their public identity. Our findings are consistent with Lasén's account of the modulation of exposure and intimacy in her study of digital self-portrait practices (2015). As Lasén explains, digital self-portraits enable the production and modulation of intimacy in ways that challenge the obligations and expectations of public self-presentation. Lasén describes these practices as choreographic, in that her research subjects deliberately set out to manage 'expectations about personal visibility' and intimate self-expression (2015:65). When coupled with problematised hashtags like #depressed, embodiment on Instagram becomes particularly fraught, and hence encourages creative techniques. The images in Figures 4 and 5 in many ways resemble both the positive and negative Inspirational posts described above, but they differ in their focus on embodied experiences associated with mental ill-health. In these two images, the use of illustration and

graphic text signals those embodied experiences, while guarding against direct visual connection with the user themselves:



Figure 4: An example of Embodied post, not tagged

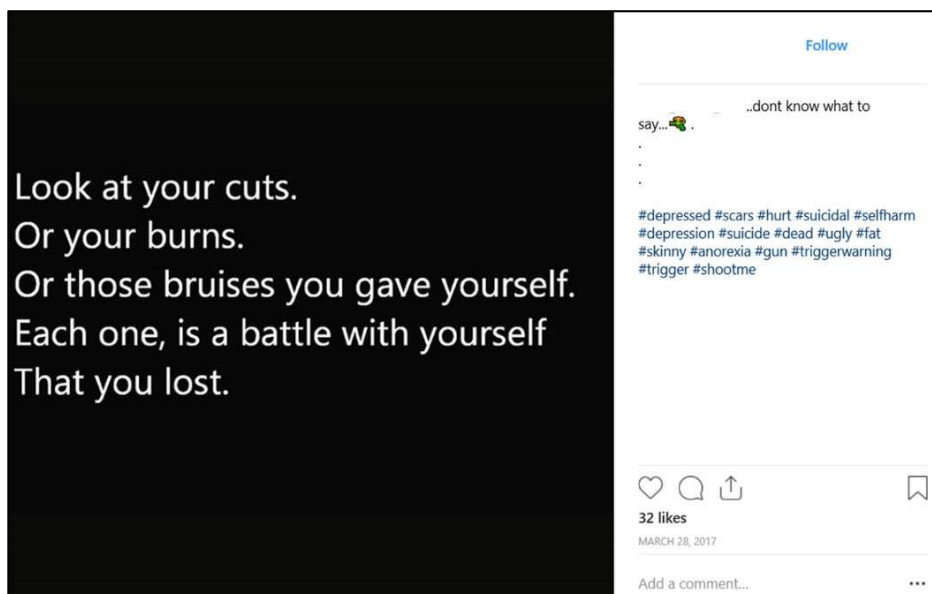


Figure 5: An example of an Embodied post, tagged

This particular Instagram user runs an account dedicated to talking about depression. But unlike the sketched arms with cuts in Figure 4, the plain text quote in Figure 5 is one of the only tagged posts from this user. Like so many other dedicated 'depressed' accounts, there is an aesthetic uniformity, a black and white 'sad aesthetic' at play that expresses many of the embodied experiences associated with depression and related aspects of mental ill-

health. But unlike those posting from Dedicated meme and/or Inspiration accounts, this particular user evidently does not consider hashtags to be an especially powerful communicative or connective tool. These types of posts are most directly dealing with the persistent stigma of mental ill-health through the careful modulation of intimacy that takes the form of using but also minimising tagging practices, and modifying account information along a spectrum of pseudonymity (van der Nagel and Frith, 2015).

Dealing with stigma, for Goffman, concerns information and control about our failings, and hence visibility 'is a crucial factor' (1968:65). Goffman's work on stigma relates to the 'perceivability' of a moral or social failing, but he emphasised the visible markers, mannerisms and signs that distinguish a person in a social situation, and this emphasis is useful for thinking about engagement with mental ill-health on visual social media, where communication and tagging practices feature as tools in the modulation of attention, information, identification and intimacy. For Dedicated accounts that maintain a sad aesthetic, Instagram provides the platform and context for visually exploring stigmatised signs of depression (or related mental ill-health), including cut marks as depicted in Figure 4 through illustration – perhaps to avoid censorship – without fear of impact on everyday social relations or standing.

It is less straightforward when #depressed content appears on an individual's general, personal account as exemplified by Figure 6.





Figure 6: An example of an Embodied post, Personal General account.

Figure 6 shows a partial selfie with an intimate, confessional caption referring to mental health distress. While this user posts many similar selfies or partial selfies, this is their only post tagged #depressed. Among their posts there are other visual signs of depression (an image of them in a bathtub simulating cut-wrists, for example, or bandaged wrists with what looks like fake blood), but without any explicit acknowledgment of depression through tagging practices or captions. The lyrical style of the caption aligns with her self-identification as a musician, but also pairs this post with affective status-statements in combination with the three hashtags #depressed #stressed #obsessed. In linguistic terms, the coupling at play here is the 'tell', or indicator of connection with the ideation of #depressed perhaps more so than with the interpersonal collective or community. More than other #depressed post practices, Embodied posts take on the issue of the potential 'social estrangement' (Ratcliffe, 2015:28) that underlies the heterogeneous experiences of depression and related forms of mental ill-health. But their more direct expression of mental health distress is riskier than the

Inspirational content (including the sad quotes) describe above, and more literal than the subversions and pathos of the memes often subverting or hijacking the hashtag for attention.

### **Conclusions: Towards a more inclusive hashtag practice approach**

In response to some of the limitations in the research methods used to study complex and 'problematic' high-use hashtags such as #depressed, this paper has sought to refine a 'hashtag practices' approach. This method encourages attention to both the large-scale patterns present in hashtagged content, and the more nuanced practices or divergent modes of hashtag use, to offer insights that challenge some of the popular but superficial investigations of mental health content on Instagram, contribute to existing research. Given the volume and variety of engagement with some hashtags, a practices approach aims to ensure an inclusive and systematic sampling strategy, and analysis that considers the contextual factors at play in profile management, visual content, captioning and collocated hashtag use. The approach mixes quantitative and qualitative analysis, but allows for dynamic application and attention to different aspects of posting practices depending on the subject matter. We have nominated four core elements to the approach: a) include posts immediately preceding and following a root post in a sample set, b) establish an inclusive (or not 'cleaned') sample of content associated with the hashtag to combat filtering bias, c) examine collocated hashtags, and d) consider contextual cues in the interplay between posts' visual content, captions and profile management. These steps can be applied in combination with other quantitative text analysis techniques such as topic modelling or time series analysis, and can help to provide a richer understanding of hashtag use after establishing broader patterns through larger scale quantitative methods.

Instead of finding a clear, coherent sense of community concerned with depression, we found patterns of deliberative profile management, careful aesthetic curation, and affiliation practices through memetic content. By using an inclusive hashtag method, and including a wider range of post types than previous research, we found that only a minority of posts in our dataset (15%) belong to profiles containing 'real name' information and identification, and these posts are less likely to include hashtags. This careful management of visibility offers vital insight into Instagram users' overall caution in signalling depression directly when it relates more closely to embodied and real name experiences. When Instagram users do make their depression publicly visible via hashtags, they code their posts and negotiate their identities in a way that might counteract a broader potential to make conversations about mental health more visible online.

We found a large number of memes, quotes, and popular culture references, typically controlled by one or more pseudonymous users managing accounts dedicated to discussing depression or other mental health conditions. Although users are forming communities through particular aesthetics (see also Ging and Garvey, 2018) and using memes as a form of social bonding, they are not in any straightforward way using the #depressed hashtag in an effort to form collective power (Rambukkana, 2015) or cohesive publics (Bruns and Burgess, 2011). The #depressed hashtag predominantly functions as a tool of *visibility* for pseudonymous social media accounts dedicated to, for example, posting highly-stylised posts relating to mental health, humorous memes, or popular culture references. As boyd (2014) and many other social media researchers have noted, engaging in technically 'public' online conversations is not necessarily indicative of a user's desire to engage *with* the public (see also Seko and Lewis 2014:192-3). The lack of hashtag cohesion also reflects the ongoing stigmatisation of mental health conditions, affecting how and what we post on platforms like Instagram. Additional research could examine this issue from the direction of users of Instagram who have mental health issues, especially where they might offer insights into hashtag practices.

These findings point to the need for more research exploring what depression looks like on social media. While this may be challenging in light of Instagram and other social media platforms' increasing API depreciation, we suggest that researchers direct part of their attention to untagged social media posts, even when aiming to understand engagement with a high-use hashtag. We also recommend, and especially in relation to mental health content, that internet researchers do not always 'clean' their datasets to reduce the volume of noisy or seemingly irrelevant content. Only by expanding the sense in which hashtags constitute and shape collective social media practices – the basis of our hashtag practice approach – are we able to explore the interesting, surprising experiences of both what it means to use a hashtag and what depression looks like on Instagram.

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