

Responding to depression-related Imgur posts: A content analysis of social support and non-bona fide features in user-generated comments

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Abstract

Objectives: A growing body of health communication scholarship has explored the utility of social media platforms for eliciting social support, although much of this scholarship has focused on *Facebook* and *Twitter*. This study contributes to this body of research by identifying support in comments submitted to depression-related *Imgur* posts. Furthermore, the use of non-bona fide linguistic features (e.g. humor, sarcasm, and irony) is documented for comparison with supportive elements.

Methods: A content analysis was performed of 1530 comments submitted in response to 20 popular *Imgur* posts about depression, including the emergence of four social support types outlined by the Multi-Dimensional Support Scale—reassuring, empathic, informational, and tangible support—as well as non-bona fide features.

Results: Findings suggest a supportive discourse, with nearly 60% of comments containing some supportive element. Reassuring and informational support emerged most prominently (26.3% and 26.2% of comments, respectively), followed by empathic (22.9%) and tangible (0.3%) support types. Non-bona fide features manifested in 28.8% of comments. Results indicate significant covariation between non-bona fide features and support, as these infrequently co-occurred.

Conclusions: This study's findings suggest that depression-related messages frequently receive support from *Imgur* commenters, especially reassuring and informational support. Additionally, this study provides a conceptual framework for future analyses of online social support by integrating non-bona fide communication with established support types. The results of this study could have implications for health professionals and scholars interested in the use of social media platforms such as *Imgur*, which serves a predominantly young male demographic, for support provision.

Keywords

Depression, social support, humor, content analysis, social media, comments, *Imgur*

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Introduction

A growing body of health communication scholarship has explored the ways that individuals communicate online about mental health issues,^{1,2} including depression,^{3–5} especially within the larger body of social support literature.^{6–12} Findings generally suggest that online communities may provide social support and hope to individuals coping with mental health issues—particularly communities specifically designed for supportive interaction (e.g. communities moderated

by health professionals). However, comparatively less research has explored depression-related communication and support provision within non-professional social media settings, despite the fact that social

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media messages typically reach a greater number of people and discourse in these settings may contrast dramatically from communication in professional environments.^{6,7,10,13–15} Moreover, previous analyses of support provision in social media have predominantly focused on a few popular platforms, most prominently *Facebook* and *Twitter*,¹⁶ hindering our ability to infer generalizability of support findings beyond these contexts.¹⁷

In response, this study expands upon previous scholarship by identifying support emergence in comments submitted in response to depression-related *Imgur* posts, providing naturalistic insight into supportive communication within a popular contemporary platform. *Imgur* (Imgur.com) is a social media site and image-hosting platform, amassing in early 2019 over 94 million unique monthly visitors worldwide, with just over 37 million originating from the United States.¹⁸ Visitors to the site, largely 18–34-year-old college-educated males,¹⁹ anonymously interact with other *Imgurians* by (a) sharing visual content through posts, (b) responding to posted content using short (140-character) comments, and (c) voting on posts and comments using “upvotes” and “downvotes,” which signify like and dislike, respectively. Despite the popularity of *Imgur* in the contemporary social media ecology, little empirical research attention has been given to this platform.^{20–22} However, *Imgur*’s site design affords a unique context to explore online communication. Unlike other popular sites such as *Reddit*, which employ an isolated community-of-interest design, or *Facebook* or *Twitter*, which utilize a user-centered design (in which the user is positioned as the central node of their social space), *Imgur* is designed around a centralized “front page” in which *Imgurians* view the same content and interact with one another through popular community-selected posts. This affords scholars an opportunity to evaluate communication and social support emergence across an entire online community, instead of within a particular community-of-interest or an individual network. Additionally, with a concentration of young male users,²³ *Imgur* provides a unique context to identify support provision by a demographic that is underrepresented in much social support research.

In addition to examining support provision, this study evaluates the emergence of non-bona fide linguistic features (e.g. humor, irony, and sarcasm),^{24,25} frequently employed by *Imgurians* (*Imgur* users)^{21,22} to determine if a relationship exists between non-bona fide features and social support in this context. Although a link between humor, social support, and health outcomes has been examined in previous scholarship,^{26–30} no research to date has explored the comparative generation of humor and support in user

comments submitted in response to depression-related social media content. Therefore, this study also furthers social support scholarship by identifying a relationship between support and non-bona fide features, which often manifest in contemporary social media platforms such as *Reddit*, *Tumblr*, and *Imgur*. To this end, a content analysis was performed of 20 popular (highly voted) *Imgur* posts about depression and comments submitted in response to these posts ($N = 1530$), examining the emergence of four social support types outlined by the Multi-Dimensional Support Scale (MDSS)³¹—reassuring, empathic, informational, and tangible support—as well as non-bona fide elements. The results of this study could have implications for health professionals and scholars interested in the use of social media platforms such as *Imgur* for support provision, especially support generated in response to depression-related messages.

Social support and mental health

A number of definitions for social support have been proposed by scholars, including definitions demarcating perceived and actual support,³² or functional and structural aspects.¹⁷ Generally, social support is conceptualized as an interpersonal social resource provided to satisfy psychosocial needs (e.g. support, information, and feedback),^{17,33} especially in response to stress.^{34,35} For individuals dealing with health issues (mental or physical), receipt of social support may be a significant factor in facilitating adaptive coping processes,³⁶ and evidence suggests that social support may improve physical health outcomes.^{37–40} However, the availability of social support is influenced by a number of factors, including the coping strategy employed by the individual.^{41–43}

The contemporary prevalence of digital channels has resulted in a number of online coping strategies for individuals managing health issues, including narrative sharing through video blogs,^{44,45} strategic enhancement of weak tie networks,⁴⁶ and involvement in professional digital intervention programs.^{47–49} Digital communication channels allow individuals to develop and utilize adaptive coping mechanisms, including support seeking.^{46,47,50} Additionally, Internet use could help prevent a long-term decrease in social resources, which may decrease an individual’s ability to effectively cope with their situation.⁵¹ For individuals coping with mental health issues, including depression, generating a social media post (e.g. an *Imgur* post) may function as a coping mechanism, allowing the individual to share their health experience (e.g. current symptoms or upcoming appointments) and may provide an expanded weak-tie support network.^{48,49}

Accordingly, recent research has explored social media posting as a strategy for eliciting social support,^{44,52–55} suggesting that users of contemporary platforms are willing to provide support in response to support-seeking messages. However, much of this research has examined large social media platforms such as *Facebook*,^{52–55} *Twitter*,^{56–58} and *YouTube*,⁴⁴ resulting in recent calls for research exploring support generation within additional platforms.¹⁷ No research to date has analyzed the supportiveness of communication within *Imgur*, yet an examination of this platform should benefit support scholarship through cross-platform comparisons with work in other sites (e.g. *Facebook* and *Twitter*), especially considering that *Imgur* serves a predominantly homogenous user-base of young males,²³ whereas the demographics of previously studied platforms such as *Facebook* are more heterogeneous. Therefore, the first goal of this study is to identify the supportiveness of comments submitted to depression-related *Imgur* posts.

RQ1: To what extent does social support emerge in Imgur comments submitted in response to depression-related posts?

Types of social support

In addition to differing levels of support availability, different types of social support may be provided, and a number of support typologies have been proposed.^{12,31,59,60} Many of these typologies are couched within the optimal matching model,⁵⁹ which argues that an individual's needs may be matched with corresponding forms of support (e.g. action-facilitating or nurturant support). Rains et al.¹² argue that action-facilitating forms of support (e.g. informational and tangible support) mitigate stressors by fostering adaptive behaviors, whereas nurturant support types (e.g. emotional, network, and esteem support) help individuals cope with their stressor by alleviating maladaptive emotional responses.^{59,60} Moreover, Rains et al.¹² claim that support provision is affected by a variety of stressor characteristics, including potential for loss, controllability, duration, and the degree to which the stressor may impact personal relationships. Thus, support providers may determine which form of support to provide partly based on the characteristics of the stressor. Previous examinations of online social support submitted in response to depression-related messages have largely focused on informational and emotional support, with some interest in tangible and network support types.^{7,14,15} Comparing between these studies, Evans et al.⁷ and Sugimoto¹⁵ found that emotional support emerged most prominently, whereas

Keating¹⁴ instead reported informational support as the most prevalent type.

Following recent support research conducted by the author,⁴⁴ this study will identify the support categories outlined by Neuling and Winefield³¹ in their MDSS: empathic, informational, tangible, and reassuring support. Empathic support (analogous to emotional support) is provided by others in environments of acceptance or love to facilitate an empathic understanding of the individual's issues (e.g. "I understand what you are going through" or "I see how you feel"). Informational support is provided to organize thoughts and provide appraisal for the individual, including advice (e.g. "Have you considered a diet change?"). Tangible support involves direct aid through financial or physical assistance (e.g. "Could I donate to help cover your medical expenses?" or "I can watch your kids next week"). Lastly, reassuring support (similar to esteem support in other typologies) provides confidence to the individual through words of affirmation or hope (e.g. "You can do this!" or "You have done a great job so far"). Importantly, these support types provide different modes of physical assistance or psychological comfort.^{31,61,62} Additionally, reviews of support research find that empathic support is most consistently linked with improved physical health.^{40,63} Thus, empathic, informational, tangible, and reassuring support types, as outlined by the MDSS, will be identified in *Imgur* comments.

RQ2: To what extent will empathic, informational, tangible, and reassuring support emerge in Imgur comments?

Non-bona fide comment features

Before conducting an analysis of communication within an online community, it may prove beneficial to first identify prevalent communicative practices employed by community members. Previous analyses of *Imgur* have identified humor as a common linguistic feature, including a preference for humorous posts and the inclusion of "formulaic humor" in comments (e.g. inside jokes and references to earlier *Imgur* content).^{21,22} In fact, Hale²¹ found that humorous posts frequent *Imgur*'s "front page" more commonly than social support posts (the category most likely to include posts about mental health) at a rate of 14:1. Additionally, previous scholars have identified a link between humor, social support, and positive health outcomes.^{26–30} Some have argued that humor may benefit individuals through its effect on mood and stress moderation (similar to social support),^{26,28} whereas others posit that humor may function as a distinct coping strategy,^{29,30} or that humor facilitates social

support provision (in particular, affiliative humor).^{28,64} However, arguments have also been advanced that the link between humor and resulting health benefits is still inconclusive.²⁷ Thus, although the connection between humor and social support may yet be unclear, evaluating their relationship in *Imgur* comments could prove enlightening.

The presence of “non-bona fide” linguistic features—including humor, irony, and sarcasm—often specified in analyses of computer-mediated discourse^{24,25} could influence the manifestation of social support. Included as a “meta-act” category in Herring’s²⁵ computer-mediated communication (CMC) Act Taxonomy, non-bona fide communication breaks the normative assumption that language should be understood literally (i.e. communication is “bona fide”). Instead, message recipients are expected to interpret the message to ascertain the sender’s true meaning (for example, sarcasm is typically understood as the opposite of the literal interpretation). Because non-bona fide markers require translation, it is possible these features will influence the provision of social support in individual *Imgur* comments. However, little research has explicitly identified the comparative generation of non-bona fide and supportive communication in online contexts, including communication generated in response to depression-related messages. Thus, the final objective of this study is to identify the prominence of non-bona fide features in *Imgur* comments and ascertain the relationship between non-bona fide markers and social support in response to depression-related *Imgur* posts.

*RQ3: To what extent will non-bona fide features emerge in *Imgur* comments submitted in response to depression-related posts?*

RQ4: What is the relationship between social support and non-bona fide features in comments submitted in response to depression-related posts?

Method

Sample

To answer this study’s research questions, a content analysis was performed of 1530 *Imgur* comments submitted to the 20 most highly-scored posts from the 12-month interval preceding 5 April 2018 containing the key term “depression” in the title, post text, or tags. These highly scored posts were selected due to their maximized community exposure (compared to posts with lower scores), as *Imgur* presents popular content (posts receiving a large number of views, comments, and “upvotes”) first to users browsing the site’s “front

page” under the default “best” setting (i.e. most *Imgur* users). Details about each sampled post are provided in Table 1. After post selection, a subset of comments—the top five comment threads for each of the 20 posts—were captured for analysis using the *Imgur* API (100 threads total). Choosing the top five comment threads, including the thread-starting root comment and all response comments ($N = 1530$), provided the greatest number of comments for analysis (compared to subsequent comment threads), and allowed analysis of the most highly scored (and subsequently most viewed) root comments and their conversations. Therefore, both post and comment selection maximized community exposure and subsequent community evaluation (i.e. through voting and commenting). In other words, the sample captured for this study included posts and comments that were (a) positively evaluated by the *Imgur* community, (b) viewed by a large number of *Imgur* users, and (c) accumulated a substantial number of user comments during the sampling window. Thus, this sample represents the community response to depression-related messages. Moreover, the sampled posts and comment threads would be particularly helpful for *Imgur* users ascertaining social support availability within this platform.

Coding procedure

A codebook was developed to examine each of the four social support types outlined by the MDSS³¹ and non-bona fide features^{24,25} within user comments ($N = 1530$). The codebook was iteratively redesigned during coder testing to specifically target depression-related *Imgur* discourse and to accommodate relevant forms of visual communication (i.e. images and gifs). A training set was selected that included 289 comments (approximately 18.9% of the sample) and intercoder reliability (ICR) was calculated according to Krippendorff’s alpha using 189 comments (12.4% of the sample). ICR for each category is reported under Measures (overall $\alpha = 0.86$). Intercoder reliability training and the subsequent analysis was completed by the author and another coder unfamiliar with this study’s research questions. Both coders were regular *Imgur* users, ensuring familiarity with *Imgur* culture and language employed within the platform. After completing reliability training, each coder categorized half of the sample and all coding was conducted within a 4-week period immediately after achieving acceptable ICR. Confusing and problematic cases were flagged during the coding process and were subsequently collectively discussed and categorized through consensus coding.

Table 1. Sampled post details.

Title	URL
Artist turns depression into something beautiful.	https://imgur.com/gallery/VhMrB
Slowly getting better with depression. For my cakeday, here's some of the posts that have helped me...	https://imgur.com/gallery/DhfDx
Started biking to fight depression. . .now it's my passion.	https://imgur.com/gallery/3Qzri
Depression to the max.	https://imgur.com/gallery/XM3nr
After months of depression and lack of interest in doing anything, I discovered that I enjoy crocheting.	https://imgur.com/gallery/ITRON
After a year of fighting low self-esteem, depression and hiding under layers of clothes.	http://imgur.com/gallery/xuPNn
Depression.	http://imgur.com/gallery/RT4oj
Coping with depression like.	http://imgur.com/gallery/gjuKu
Photograph of unknown man during the Great Depression. Relatable.	http://imgur.com/gallery/CtoVs
Depression bear.	http://imgur.com/gallery/MijZ3Zr
Some depression comics.	http://imgur.com/gallery/gzTMg
Checkmate, depression.	http://imgur.com/gallery/fxSYP
Trying to feel better.	http://imgur.com/gallery/CBzxNgh
It comes out of nowhere. Depression.	http://imgur.com/gallery/ryrSY
13-year-old boy with depression finds happiness by making his little sis's day.	http://imgur.com/gallery/wLAok
The depression is strong with this one.	http://imgur.com/gallery/Mf4CA
MRW seeing and conversing with all the regulars at the gym after my month-long hiatus because of depression.	http://imgur.com/gallery/eba2h
Fuck depression!	http://imgur.com/gallery/wMALV
Depression is a bitch.	http://imgur.com/gallery/cztxg
Currently going through a bad bout of depression and depression memes always help so I thought I would share some favorites.	http://imgur.com/gallery/qR4YC

Titles were written by the original poster.

MRW: my reaction when.

Measures

Social support types. The presence of each support type outlined by the MDSS³¹ was coded using a dichotomous yes/no response, following the categorization scheme employed in previous work.⁴⁴ *Empathic* support ($\alpha = 0.80$) was coded when commenters acknowledged the *Imgur* poster's emotions or feelings (e.g. "I see how depressed you are"), or in cases where the commenter encouraged the poster to continue

discussing their experience (e.g. "Please keep us updated"). *Reassuring* support ($\alpha = 0.80$) was coded when commenters expressed hope, a compliment, or provided an uplifting message (e.g. "You can do this!"). *Informational* support ($\alpha = 0.81$) was coded whenever commenters provided factual information within the comment text (e.g. "Exercise might help"). Lastly, *tangible* support ($\alpha = 1.0$) was coded when the commenter expressed interest in assisting the individual

financially or in another tangible way (e.g. “Can I donate money?”). Support types were not mutually exclusive. In addition to categorizing each type, the presence of *any support* was documented ($\alpha=0.89$) as a dichotomous factor.

Non-bona fide features. In addition to social support, comments were evaluated for *non-bona fide* elements ($\alpha=0.87$), as outlined by prior work in computer-mediated discourse analysis,²⁵ using a dichotomous yes/no category. Because communication is typically considered bona fide (i.e. the literal interpretation of the text is assumed to be true), comments were categorized as *bona fide* unless clear non-bona fide features manifested in the comment text. Non-bona fide features included humor (e.g. “Are you sure lying down for 3 days won’t help?”), sarcasm (e.g. “I’m having a hard time sleeping at night, thanks depression!”), and irony (e.g. “I’m very grateful to have depression in my life”). Because humor is frequently ambiguous, unclear and problematic cases were flagged by the coders, and subsequently collectively discussed and coded.

Results

Most comments included in this dataset contained some supportive element (see Table 2), with reassuring support emerging most prominently, followed by informational and empathic support. Each of these support types manifested at a comparable frequency, especially reassuring and informational support, whereas tangible support occurred infrequently. Furthermore, non-bona fide features emerged more frequently than any individual support type. Examples of each support type and non-bona fide elements from this dataset are provided in Table 3. Comparing root and response comments yields additional information about this

discourse, as root comments included support and non-bona fide features more frequently than response comments (Table 2). A chi-square test comparing empathic support between root and response comments was significant ($X^2=4.43$, $df=1$, $p<.05$), with empathic support manifesting more frequently than expected in root comments (observed = 32; expected = 22.94) and less frequently than expected in response comments (observed = 319; expected = 328.06). A comparison of reassuring support between root and response comments was nearly significant ($X^2=3.74$, $df=1$, $p<.06$), as reassuring support occurred more frequently than expected in root comments (observed = 35; expected = 26.27) and less than expected in response comments (observed = 367; expected = 375.73). Additional tests for informational support, any support type, and non-bona fide features were not significant (all $p>.2$). These results indicate that commenters who responded directly to the *Imgur* poster (through thread-starting root comments) included empathic support at higher rates than commenters responding within comment threads (i.e. through response comments), whereas root and response comments similarly incorporated reassuring support, informational support, and non-bona fide features (and rarely provided tangible support).

To ascertain a possible relationship between non-bona fide features and social support, a series of chi-square tests were run. Findings indicate significant covariation of non-bona fide features and supportive elements, as these content categories infrequently co-occurred. Non-bona fide features infrequently manifested alongside reassuring ($X^2=50.42$, $df=1$, $p<.001$), empathic ($X^2=105.94$, $df=1$, $p<.001$), informational ($X^2=136.66$, $df=1$, $p<.001$), and all support types ($X^2=368.03$, $df=1$, $p<.001$). The

Table 2. Frequencies of comment features.

Comment feature	Root comments ($N=100$) Frequency (%)	Response comments ($N=1430$) Frequency (%)	All comments ($N=1530$) Frequency (%)
Reassuring support	35 (35)	367 (25.7)	402 (26.3)
Empathic support	32 (32)	319 (22.3)	351 (22.9)
Informational support	30 (30)	371 (25.9)	401 (26.2)
Tangible support	1 (1)	4 (0.3)	5 (0.3)
Any support type	65 (65)	830 (58.0)	895 (58.5)
Non-bona fide features	33 (33)	408 (28.5)	441 (28.8)
Any feature	89 (89)	1160 (81.1)	1249 (81.6)

Support types and non-bona fide features were not mutually exclusive.

Table 3. Selected examples of support types and non-bona fide features in comments.

Support type	Example
Reassuring	“Hang in there buddy. It will get better. It always does.” “Remember it wasn’t about you. He was selfish but there are people in this world who will respect and deserve you. Stay strong.”
Empathic	“Yeah, I know the feeling. Never feel guilty for talking! If people make you feel like that, they aren’t the right people to talk to.” “I’m sorry you’re having a rough day :(it makes you feel even worse when your depression affects your kids.”
Informational	“Friendly reminder to everyone that exercise and proper diet go a long way to helping combat depression. Won’t cure it, but helps a lot.” “CBT and talk therapy also work great together for depression and anxiety (without the side effects of medication), talk to your therapist :)”
Tangible	“I’d pay you to crochet me a fox, but I’m sure you’re from somewhere so far that the shipping would make it not really worth it. . .” “I would pay for some stuff made as well tbh.”
Non-bona fide	“Your husband turned you out. You’re a hooker now” (in response to the poster taking up crocheting). “I tried heavy alcohol consumption. Does that count?” (as a strategy for combatting depression).

Support types are not mutually exclusive. Examples of non-bona fide features are contextualized to assist interpretation. Minor punctuation and capitalization changes were made to some comments. CBT, cognitive behavioral therapy.

relationship between non-bona fide features and tangible support was not tested due to scarcity of this support type (see Table 2). For comments that included reassuring support, non-bona fide features emerged less frequently than expected (observed = 60; expected = 115.88), and this same pattern occurred for empathic (observed = 24; expected = 101.17), informational (observed = 24; expected = 115.58), and all support types (observed = 90; expected = 257.97). In contrast, for comments that did not include reassuring support, non-bona fide features occurred more frequently than expected (observed = 381; expected = 325.13), and this pattern also emerged for empathic (observed = 417; expected = 339.83), informational (observed = 417; expected = 325.42), and all support types (observed = 351; expected = 183.03). Therefore, although comments within this discourse frequently included elements of social support and non-bona fide features, they rarely comprised both.

Discussion

Through a content analysis of comments submitted in response to user-generated *Imgur* posts about depression, this study’s findings provide a naturalistic insight into supportive communication in a contemporary platform that serves nearly 100 million users,¹⁸ including a large concentration of young males.²³ Overall, the findings of this study indicate a supportive discourse. Commenters provided at least one form of social support in nearly 60% of cases, meaning that comments

were more likely than not to include some supportive element. More specifically, reassuring and informational support emerged most prominently in this discourse (included in 26.3% and 26.2% of comments, respectively), followed by empathic (22.9%) and tangible (0.3%) support types. Although the prevalence of reassuring support has not manifested in previous support research exploring depression-related discourse, the frequency of informational support agrees with Keating,¹⁴ but contrasts with the prevalence of emotional support found by Evans et al.⁷ and Sugimoto.¹⁵ Within *Imgur*, reassuring comments frequently contained statements intended to encourage the poster (e.g. “Great job! I hope people get inspired by you”, and “Hang in there!”), whereas informational comments provided information that the poster may not have considered (e.g. “You should get tested for [sexually transmitted diseases]” in response to a poster who caught their partner cheating). Although empathic support occurred less frequently (e.g. “I totally understand how you feel, I also went through this”), the emergence of this support type in nearly 23% of comments could have important implications as this support type has been linked to improved physical health for support beneficiaries,^{40,64} and may help foster a sense of community. The scarcity of tangible support agrees with previous analyses of social media communication as this support type may be difficult to provide through digital platforms.^{12,44} Moreover, because the top five

comment threads submitted to each sampled post were selected for analysis, these results suggest that the *Imgur* community encourages (i.e. upvotes) communication that includes social support in response to posts about depression. In other words, because the sampling process captured *Imgur* posts and comments that were positively evaluated by the community and prominently positioned within the site (i.e. posts and comments were ranked highly), which resulted in a large number of views and subsequently received feedback (i.e. votes and comments) from many *Imgur* users, these findings indicate that the normative and prototypical *Imgur* response to depression-related messages is supportive.

In addition, non-bona fide features (humor, sarcasm, and irony) manifested in nearly 29% of all comments, more than any individual form of social support. This finding agrees with previous observations that *Imgur* users heavily utilize humor.^{21,22} Non-bona fide content in this sample ranged from in-situ humor (e.g. “The only better way to destroy a bike is to let your mom borrow it”), to witty retorts (e.g. responding to “Love is a verb” with “But you just used love as a noun”), sarcastic responses (e.g. “Can you point out where these faithful people are? I’m having a heck of a time finding one!”), and self-deprecating statements (e.g. “I’m a poor example of our species”). Furthermore, results of this study indicated a significant relationship between non-bona fide features and social support. Comments that included non-bona fide features rarely contained social support, including reassuring, empathic, and informational support. Similarly, comments that included social support did not often incorporate non-bona fide features. Therefore, although comments within this discourse frequently included social support and non-bona fide features, they rarely comprised both. This finding could be interpreted in at least two ways: (a) the presence of non-bona fide text inhibits support (or vice-versa), or (b) humor and other forms of non-bona fide communication function similarly to support, possibly by keeping the discourse lighthearted, resulting in stress reduction and improved mood.^{26,28} The latter interpretation agrees with previous scholarship suggesting that humor functions as a separate coping strategy to social support.^{29,30} This finding also agrees with the assertion that humor facilitates social support provision.^{28,64} However, because of this study’s correlative findings, these interpretations can only be speculatively posited.

Considering social support and non-bona fide findings together, nearly 82% of comments included at least one of this study’s categorized features, indicating a supportive and lighthearted discourse in response to depression-related *Imgur* posts. These results suggest the *Imgur* community is supportive toward depression-related messages, including messages describing

depressive symptoms and possible solutions within the site. This is reflected in the “front page edits”—edits to an *Imgur* post after achieving “front page” status that typically respond to commenters—that many posters created. One poster stated, “Thanks so much for all of the support and laughs you guys,” whereas another wrote “Thank you all for your kind words.” A third poster provided a more detailed response, writing “Woke up to so many kind words and upvotes [upvotes]. Thank you everyone! I’m really touched by the support of this community. You guys are awesome.” Another responded stating “Wow, never expected to see this much support, nor did I expect [front page]. Thanks to everyone.” One final poster thanked commenters by writing “Thank you. It’s nice to see random people encouraging and hoping for the best for people they don’t know. Made me cry a little.” Therefore, the supportiveness of *Imgur* discourse examined in this study seemed to impact the posters receiving this support.

The contemporary prevalence of social media has provided unprecedented access to expanded social support networks, and accordingly scholars interested in social support have explored social media platforms as venues for communicating about mental health issues,^{1,2,9} including depression.^{6,10,13} Although research evaluating the utility of professional resources, including online communities monitored by health professionals,^{65,66} has affected our understanding of social support and the possibilities for enhanced support provision through digital channels, more research is needed to understand the availability of support through contemporary social media platforms.¹² In particular, research of platforms beyond popular social media sites such as *Facebook* and *Twitter* (e.g. *Reddit*, *Tumblr*, and *Imgur*) is valuable for ascertaining the generalizability of previous support findings.¹⁷ Accordingly, this study contributes to online social support research by identifying support generated in response to depression-related *Imgur* posts, finding that support within the male-dominated *Imgur* platform differs somewhat from other contexts.^{7,14,15} Moreover, this study expands on previous social support research by identifying the prevalence of non-bona fide features (e.g. humor, irony, and sarcasm),^{24,25} which are commonly employed within *Imgur* and other modern platforms.^{21,22} The finding that non-bona fide features rarely coincided with social support indicates a need for further research, as social support scholarship has rarely considered the use of humor alongside support provision, despite the prevalence of humor in contemporary digital discourse.

The findings of this study could have implications for health professionals and scholars interested in the use of social media platforms such as *Imgur* for support provision, especially support generated in response to

depression-related messages. These results suggest that messages about depression (including those created by individuals suffering from self-disclosed depressive symptoms) receive support from the *Imgur* community in a majority of comments. Moreover, findings of this study indicate that posts about depression commonly receive three forms of support—reassuring, informational, and empathic—as well as humorous responses. Therefore, these findings suggest that stakeholders interested in facilitating supportive exchange (e.g. health professionals) could encourage patients to communicate about mental health with the *Imgur* community, especially if the patient is already familiar with the platform. Because platforms such as *Imgur* afford pseudonymity (i.e. users can protect their identity through the use of pseudonyms), posting within this space allows individuals to communicate about their mental health while avoiding identifiability. Furthermore, as this study’s findings suggest the *Imgur* community supports communication about mental health, the platform could potentially be leveraged by health professionals and scholars interested in health promotion. Specifically, *Imgur* could present an opportunity to target a community of young males with information about mental health, instead of individuals or a community of interest (e.g. r/depression or r/depression_help in *Reddit*).

Limitations and future directions

Future work interested in social support in digital media contexts would benefit by building on the findings of this study while also addressing some of this study’s limitations. First, the use of a dichotomous category for measuring social support (and non-bona fide features) hinders this study’s ability to infer support strength within comments. Future work may benefit from a more nuanced measurement that expands the dichotomous category employed here. However, it should be noted that the 140-character restriction imposed by *Imgur* could inhibit the possibility of particularly robust support. Another possible limitation is the non-random sampling strategy implemented for this study, as this could limit generalizability of findings. However, a truly random sample of *Imgur* content would provide a limited view of user communication as this strategy would capture many posts that never achieve “front page” status, meaning that relatively few users would have an opportunity to provide votes and comments. Therefore, the sampling strategy employed in this study captured highly scored posts curated by the community, allowing many community members to view and respond to posted content. One possibility for future work is to compare supportiveness of communication in response to non-front page

(i.e. “user submitted”) and front page content. However, it might be noted that *Imgur* users interested in assessing social support availability would likely refer to popular (i.e. “front page”) posts for this determination, and thus popular content may be a more accurate reflection of overarching community sentiment. Additionally, future researchers may want to delve further into the relationship between social support provision and the use of non-bona fide linguistic features, especially in digital communication. Interviews with support seekers to determine their perceptions of supportive and humorous feedback could be particularly enlightening, as the relative benefits of these features for recipients cannot be ascertained from content analysis data. Another possibility for future research is to examine posting behaviors over time, identifying communication patterns of *Imgur* users across multiple posts, including changes in the way posters describe their experiences with depression and the support-seeking strategies they employ following community feedback (i.e. comments and votes). However, it should be noted that users can delete their posts, and considering the sensitive nature of discussing mental health, tracking posting habits over time could present a unique challenge for researchers.

Conclusion

Following a content analysis of 20 popular *Imgur* posts about depression and comments submitted in response to these posts ($N = 1530$), the results of this study suggest that depression-related discourse within *Imgur* is simultaneously supportive and humorous. Moreover, although social support and/or non-bona fide features emerged in nearly 82% of comments, these rarely coincided in a single comment. Following the framework established by the MDSS,³¹ four support types were identified—reassuring, empathic, informational, and tangible. Consistent with some previous work, reassuring and informational support emerged most prominently in comments, followed by empathic and tangible support types.^{14,44} This study contributes to the expanding body of scholarship analyzing social support provision within social media contexts by identifying support in a popular, yet understudied contemporary platform—*Imgur*. Findings have implications for professionals and scholars interested in the use of social media platforms such as *Imgur* for support provision, especially support generated in response to depression-related messages.

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