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<td>© 2015 Mary Ann Liebert. This is the author created version of a work that has been peer reviewed and accepted for publication by Cyberpsychology, Behavior, and Social Networking, Mary Ann Liebert. It incorporates referee’s comments but changes resulting from the publishing process, such as copyediting, structural formatting, may not be reflected in this document. The published version is available at: [<a href="http://dx.doi.org/10.1089/cyber.2015.0214">http://dx.doi.org/10.1089/cyber.2015.0214</a>].</td>
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Tweeting Social Support Messages After a Non-Celebrity's Death:
The Case of the Philippines' #Fallen44

John Robert Bautista
Wee Kim Wee School of Communication and Information
Nanyang Technological University

Trisha T.C. Lin
Wee Kim Wee School of Communication and Information
Nanyang Technological University

*Corresponding author:
John Robert Bautista
31 Nanyang Link 637718, Singapore
Email: john0028@e.ntu.edu.sg

Citation:

Tweeting Social Support Messages After a Non-Celebrity's Death:

The Case of the Philippines' #Fallen44

Abstract

Nowadays, social network sites (SNS) have provided an accessible means to convey social support to griever who mourn for the dead. To explore how Twitter is used to convey social support after a non-celebrity’s death, this study conducted a content analysis of 1,557 Twitter posts bearing the hashtag #Fallen44 – a reference to the death of 44 elite Philippine policemen during a terrorist manhunt. Using a hybrid coding approach, the findings show that Twitter users conveyed social support by sending informational (56.28%) and emotional (39.76%) support messages. Informational support was mostly expressed by posting or sharing pictures and news articles relevant to the Fallen44, while emotional support was mostly conveyed by paying tribute, showing sympathy, and offering prayers for them. Moreover, a small proportion (3.96%) of tweets did not convey social support but reflected humor or anger or were spam messages. This study is one of the first to provide empirical support for the use of Twitter to convey social support after a non-celebrity’s death in an Asian setting. Practical and theoretical implications for online social support are discussed.
Introduction

Social support is an important aspect of human life. As social beings, people have the innate need to be appreciated and recognized by others either through the provision of tangible or intangible support. The need for social support depends on the situation. However, the need arises when people experience grief caused by the death of a loved one. Conveying social support to griever at this point of time is important as it supports positive coping and, ultimately, recovery.

Providing social support is no longer limited to face-to-face interactions. Today, the growing popularity of social network sites (SNS) has made it possible for more people to communicate social support to those who are grieving. There are two main reasons why SNS are relatively popular for conveying social support. First, SNS provide affordances for users to send social support messages since they are less restricted by geographical or temporal limitations. Second, users can opt for anonymity when posting social support messages, thereby protecting themselves from prejudice or stigmatization. Although there are numerous SNS that can be used to convey social support in the context of a person’s death, past scholarly studies were more focused on Facebook.

Aside from Facebook, another widely used SNS today is Twitter. As of March 2015, Twitter has an active user base of at least 302 million people. Launched in 2006, Twitter is a microblogging platform that enables users to send messages (tweets) within a limit of 140 characters. Aside from posting self-generated messages, Twitter enables users to share other users’ posts using the retweet (RT) function. To date, 500 million tweets are sent per day on average. To organize massive amounts of tweets, users can type in unique keywords as hashtags – words preceded by a hash symbol (#) – to aid in the search process.
Most empirical studies using Twitter data have investigated public opinion of politics\textsuperscript{16-18} and social movements.\textsuperscript{19,20} Unfortunately, not much research has been conducted to understand the role of Twitter in facilitating social support in the context of a person’s death. For now, few studies exist. For instance, by analyzing 50,000 tweets regarding Michael Jackson’s death, Lee and Goh found that Twitter is a valuable source of informational and emotional social support that can reduce the emotional toll of those who are grieving.\textsuperscript{7} Their findings also echoes the earlier study by Mathioudakis and Koudas which suggests that Twitter is a convenient platform for people to express social support for the death of a prominent celebrity like Michael Jackson.\textsuperscript{21} However, one may wonder how social support is conveyed online when a non-celebrity figure from an Asian country dies.

Recently, the Philippines experienced a tragedy that shocked its citizens. On January 25, 2015, forty-four members of the Philippine National Police’s elite Special Action Forces were killed in a top-secret police operation to capture two high-value terrorist bomb makers in the country’s southern province of Maguindanao.\textsuperscript{22} To commemorate the heroic deeds of the slain policemen, President Benigno Aquino III declared a National Day of Mourning (NDM) on January 30, 2015.\textsuperscript{23} Although the funeral of the policemen was limited to family members, government officials and police personnel,\textsuperscript{24} others offered their condolences through messages posted on various SNS.\textsuperscript{25} Interestingly, tweets posted on that day which contained the hashtag #Fallen44 (a reference to the forty-four slain policemen) became one of the trending topics on Twitter worldwide and in the Philippines.\textsuperscript{26} On the same day, a search on social media analytics website Topsy indicates that more than 50,000 tweets were posted using the hashtag #Fallen44.\textsuperscript{27}

Although previous studies demonstrate how Twitter was used to convey social support after a person’s death,\textsuperscript{7,21} their findings are relatively limited in the context of a Western
celebrity’s death (i.e., Michael Jackson). Compared to celebrities who may receive massive amounts of social support messages upon their deaths due to their popularity,\textsuperscript{28,29} the extent to which these messages are conveyed when a non-celebrity dies is relatively unknown. As such, there is a need to complement previous research by examining how people convey social support on Twitter when a non-celebrity dies.

It is interesting to note that the Fallen44 only gained recognition posthumously and were not recognized as prominent public or celebrity figures previously. Thus, examining if social support messages were conveyed to them provides a meaningful context as people may not have a strong sense of connection to them as they are non-celebrities. In lieu of this, we aim to answer the following research questions:

RQ1: What are the characteristics of #Fallen44-related tweets that were posted during the NDM?

RQ2: Was social support conveyed on Twitter among #Fallen44-related tweets during the NDM? If so, what types of social support tweets were posted?

**Method**

*Study design and data collection*

To answer the research questions, this study conducted a content analysis of messages acquired from Twitter. Content analysis is a method used to analyze written, verbal, or visual communication messages.\textsuperscript{30} This particular method is ideal to analyze Twitter data since it is mainly composed of text and symbols.\textsuperscript{31} Moreover, previous studies indicate that content analysis of Twitter data can provide a snapshot of human behaviors that are of great interest to social science researchers.\textsuperscript{13,32}
In terms of data collection, a tweet harvesting software (NodeXL) was used to collect tweets. Tweets were downloaded by searching for messages that contain the hashtag #Fallen44 on January 30, 2015. This particular hashtag was selected since it became one of the trending topics on Twitter globally and in the Philippines on that day. Next, the collection date was selected as it coincides with the NDM and it also marks the first day of the funeral where President Benigno Aquino III offered his personal condolences to the families and relatives of the Fallen44. Although more than 50,000 tweets bearing the hashtag #Fallen44 were posted on 30 January 2015, we were only able to collect 1,557 tweets on that day due to download rate limitations imposed by Twitter on NodeXL. To maximize the generalizability of the findings, all collected tweets were analyzed accordingly. Each downloaded tweet includes the message, author’s user name, and time stamp.

**Coding scheme and analysis**

Numerous studies have empirically used Cutrona and Suhr’s social support behavior codes (SSBC) in order to classify social support messages. Based on the SSBC, social support is classified into five categories, namely (1) informational support, (2) tangible assistance, (3) active participation, (4) esteem support, (5) network support, and (6) emotional support. Each category also has various sub-categories. For example, informational support comprised of performing suggestion/advice, referral, situation appraisal, and teaching.

Although previous studies have extended SSBC to classify social support messages that were posted online, there were differences on how it was used as a coding scheme. While Coulson and Fukkink followed a deductive approach by explicitly using SSBC as their primary coding scheme, Lee and Goh as well as Coursaris and Liu performed a hybrid coding approach (i.e., deductive and inductive) by following the categories of SSBC while creating new
codes. The need to develop new codes was necessary since categories and sub-categories within SSBC were not intended to classify social support messages in the context of a person’s death.\textsuperscript{7}

In this study, tweets were coded following a hybrid approach. Hybrid coding refers to the use of both inductive and deductive approaches to coding.\textsuperscript{39} Using both approaches to coding enhances the rigor of a qualitative study since it provides balanced coding data based on an existing framework (i.e., deductive coding) while being open for new codes that might emerge from the data (i.e., inductive coding).\textsuperscript{8, 39} To perform hybrid coding, a deductive approach was first implemented by coding tweets according to codes derived from SSBC and Lee and Goh’s\textsuperscript{7} study. Next, inductive coding was performed during the coding process by adding new codes (if needed) at the sub-category level to create a better representation of the posted messages.\textsuperscript{8}

Although a Twitter post is only limited to 140 characters, it is possible to identify more than one sub-category for each tweet. Thus, tweets were coded more than once if it satisfies some of the operational definition of other sub-categories.

The final code book used in this study is presented in Table 1. It should be noted that no tweets were associated with tangible assistance, active participation, network support, and esteem support as they might have been irrelevant in the context of the study. This study also found non-social support messages and coded them following Lee and Goh’s advice.\textsuperscript{7} Moreover, it was noticeable that several tweets shared or posted pictures and videos related to Fallen44. As such, this study contributes new codes in the form of “posting or sharing pictures” and “posting and sharing videos.”
<table>
<thead>
<tr>
<th>Tweet categories and subcategories</th>
<th>Operational Definition</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Sample Tweet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Informational support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posting or sharing pictures</td>
<td>Posting or sharing pictures related to the Fallen44.</td>
<td>1,308</td>
<td>56.28%</td>
<td>Apparently PNoy has been talking to the families individually since 10am. He has his ways. #fallen44 <a href="http://t.co/XKFQisYu5">http://t.co/XKFQisYu5</a></td>
</tr>
<tr>
<td>Posting or sharing news articles</td>
<td>Sharing news stories related to the Fallen44</td>
<td>378</td>
<td>24.28%</td>
<td>RT @ABSCBNNews: &quot;To our President, we seek for your help to attain justice. Please, sir president. Please help us.&quot; #Fallen44 <a href="http://t.co/Y">http://t.co/Y</a>...</td>
</tr>
<tr>
<td>Posting personal comments</td>
<td>Posting personal opinions about Fallen44-related issues.</td>
<td>237</td>
<td>15.22%</td>
<td>fight for freedom even if their life will be the exchange #Fallen44</td>
</tr>
<tr>
<td>Providing status updates</td>
<td>Real-time posting of activities and observations.</td>
<td>111</td>
<td>7.13%</td>
<td>January 30, 2015 #NationalMourningDay #Fallen44 #Respect</td>
</tr>
<tr>
<td>Posting or sharing videos</td>
<td>Posting or sharing videos related to the Fallen44.</td>
<td>12</td>
<td>0.77%</td>
<td>RT @fccf_smo: A Tribute to the #Fallen44: <a href="http://t.co/zazDwaPAXY">http://t.co/zazDwaPAXY</a> via @YouTube</td>
</tr>
<tr>
<td>Asking questions</td>
<td>Asking questions about the Fallen44.</td>
<td>2</td>
<td>0.13%</td>
<td>“@ifichealligh @jazy526 Sorry if this is a sensitive topic..but may i know what #Fallen44 is all about??</td>
</tr>
<tr>
<td><strong>Emotional support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paying tribute</td>
<td>Honoring and acknowledging the Fallen44.</td>
<td>924</td>
<td>39.76%</td>
<td>You will always be remembered and honored. Thank you. #Fallen44 #Tagaligtas #SAF44 <a href="http://t.co/chn9g6o5b7">http://t.co/chn9g6o5b7</a></td>
</tr>
<tr>
<td>Expressing sympathy</td>
<td>Posting condolences to the Fallen44 and their families.</td>
<td>243</td>
<td>15.61%</td>
<td>Our collective hearts are heavy with sympathy for our fallen heroes. Thank you for serving our country. #FallenButNotForgotten #Fallen44</td>
</tr>
<tr>
<td>Offering prayer</td>
<td>Offering prayers to the Fallen44 and their families.</td>
<td>180</td>
<td>11.56%</td>
<td>Sending out my thoughts and prayers to the 44 slain SAF. #Fallen44 #NationalDayOfMourning</td>
</tr>
<tr>
<td>Expressing grief and shock</td>
<td>Expressing emotional distress, shock and disbelief over the death of the Fallen44.</td>
<td>135</td>
<td>8.67%</td>
<td>I am sincerely dying inside. My heart is crying,grieving.Nobody deserves that kind of death. RIP and soar high,our brave soldiers. #fallen44</td>
</tr>
<tr>
<td><strong>Non-social support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spamming</td>
<td>Posting gibberish and content not related to the Fallen44.</td>
<td>92</td>
<td>3.96%</td>
<td>enliven Via dexterously would Tweet readable <a href="http://t.co/ZRwk9ht4PN">http://t.co/ZRwk9ht4PN</a> #HappyBirthdayPhil #Fallen44 #MyJanuaryIn5Words #NOal3mas2</td>
</tr>
<tr>
<td>Expressing anger</td>
<td>Expressing anger and/or blaming the government and other parties for the death of the Fallen44.</td>
<td>30</td>
<td>1.93%</td>
<td>You did nothing!! you let them die. you're the president so you're responsible for it. &lt;///3 @noynoyaquino #Fallen44</td>
</tr>
<tr>
<td>Expressing humor</td>
<td>Joking about the Fallen44.</td>
<td>4</td>
<td>0.26%</td>
<td>Parang Transformers Revenge of the #Fallen44 Ing [Translation: This is just like Transformers Revenge of the #Fallen44]</td>
</tr>
</tbody>
</table>

Note: Since each tweet was coded up to a maximum of four codes, 2,324 codes were generated from 1,557 tweets. The frequency for each tweet category is the sum of its subcategories. To compute for the percentage, 2,324 was used as the denominator for categories while 1,557 was used for subcategories.
Interrater reliability

Before coding the entire dataset, a total of 30 tweets were randomly selected to check for interrater reliability. The first author along with two graduate students independently coded the tweets using Nvivo 10. The resulting Cohen’s Kappa was 0.88, suggesting adequate interrater reliability. Disagreements were discussed and resolved to further increase the reliability of the final code book.

Results

In response to RQ1, most of the collected tweets were retweets ($n = 830; 53.31\%$) rather than original tweets ($n = 727; 46.69\%$). Likewise, users posted more retweets ($M = 3.58, SD = 12.56$) than original tweets ($M = 1.10, SD = 0.66$) on average. Interestingly, the highest number of retweets ($n = 167; 20.12\%$ of all retweets) were news-related posts from a news channel account (@abscbnnews) while the highest number of original tweets were from a spam account (@mobilemobile; $n = 16; 2.2\%$ of original tweets).

To answer RQ2, codes from each sub-category were added to represent the number of coded tweets. Overall, 2,324 codes were generated from 1,557 tweets since each tweet was coded up to a maximum of four codes. Results show that majority of the coded tweets conveyed social-support in general. Specifically, $56.28\%$ ($n = 1,308$) conveyed informational support while $39.76\%$ ($n = 924$) conveyed emotional support. Aside from social support tweets, a small number of coded tweets were categorized as non-social support ($n = 92; 3.96\%$).

Each message category also yielded at least three subcategories. Table 1 provides a complete list of the subcategories, frequency, percentage, and sample tweets. Of the six subcategories under informational support, most of the tweets were about posting or sharing pictures related to the Fallen44 (36.48\%). This was followed by posting or sharing news articles
and posting personal comments (15.22%). Other subcategories under informational support were providing status updates (7.13%), posting or sharing videos (0.77%), and asking questions (0.13%). Next, there were four subcategories under emotional support. Among the four subcategories, majority of the tweets were about paying tribute (23.51%) and expressing sympathy (15.61%). Other subcategories include offering prayer (11.56%) and expressing grief and shock (8.67%). Aside from social-support tweets, there were also few non-social support tweets that were classified into three sub-categories. These include spamming (3.74%), expressing anger (1.93%), and expressing humor (0.26%).

Discussion

The case of the Philippine’s Fallen44 presents a meaningful context on how Twitter is used to convey social support after the death of a non-celebrity in an Asian setting. In this study, a content analysis was performed to tweets bearing the hashtag #Fallen44 in order to determine the presence and extent of social support messages conveyed by Filipino Twitter users. In general, the findings indicate that Filipinos use Twitter as a platform to convey social support to those grieving due to the Fallen44’s death.

Majority of the coded tweets contain social support messages and this result is consistent with previous studies.7,8 Accordingly, the result suggests that the use of Twitter to convey social support can also happen when a non-celebrity dies. Although a celebrity’s death would generate more tweets containing social support messages due to their popularity, it can be inferred that people would still convey such messages when a non-celebrity dies since such behavior can be considered ritualistic.28,29 Moreover, in a collectivistic country like the Philippines, it can be argued that conveying social support after a person’s death is also a cultural expectation.40 Thus,
through the affordances provided by Twitter, it is now possible for more Filipinos to fulfill this expectation whether the dead person is a celebrity or not.

Also consistent with previous studies, social support was more informational than emotional. Among the sub-categories of informational support, more than half of the tweets were about posting or sharing news-related pictures and articles. It should be noted that most of the tweets under these subcategories originated from news organizations. This has been due to trends among mainstream news organizations to publish their content on Twitter as it has a large user base. This study also found that tweets posted by a news channel were the most retweeted by users. This suggests that Twitter seems to be a source of relevant news among its users. As the story behind the death of the Fallen44 was developing at that point in time, users who provide and share news on Twitter convey social support by sharing timely information about the Fallen44.

Aside from informational support, a significant number of users also conveyed emotional support by paying tribute, showing sympathy, offering prayer as well as expressing grief and shock. This suggests that Twitter is an online space where mourners can remember and grieve the dead. Moreover, as digital space is a democratic environment where anyone can be anonymous, users may find Twitter a platform for catharsis without fear of prejudice or stigmatization. By conveying messages that express emotional support on Twitter, users can utilize this space to feel comfort and relief that can potentially help facilitate adequate coping in response to a person’s death.

Apart from social support, this study also found a small number of tweets that did not convey social support. Based on the results, 16 messages were posted by a single spam account – the highest recorded number of original tweets. Of all SNS today, Twitter is one of the most
attractive sites for cybercriminals to deploy spam accounts and messages. With the popularity of #Fallen44 as a hashtag, spammers take advantage of the situation by posting malicious messages and hyperlinks. This finding indicates that Twitter users should be aware of these spam messages and avoid accessing malicious links within them to prevent any potential data loss or privacy breaches. Aside from spam messages, messages conveying anger were also noted. These messages were either directed to the president of the Philippines or to the terrorists involved in the incident. Nonetheless, it is relatively normal for some people to express anger and blame others for the death of a person as it is part of the bereavement process. There were also some messages that conveyed jokes about the death of the Fallen44. This phenomenon is relatively unavoidable as the freedom of expression online have encouraged internet trolling.

The findings of this study should be balanced with its limitations. For instance, not all Filipinos use Twitter and the results of this study are largely centered on its users. Thus, the findings here might not be an accurate representation of the entire Filipino population. Moreover, the number of tweets used for this study is relatively small compared to the total number of tweets posted on January 30, 2015. Other results might appear if more tweets were analyzed. Finally, Twitter is not the only social networking site where Filipinos can express social support. Data from other SNS might offer a different perspective contrary to the study’s research findings. As such, future studies may need to analyze more messages compared to what has been covered here and include data aside from the ones collected on Twitter.

Despite the limitations mentioned above, this study provides several theoretical and practical contributions. First, this study contributed additional knowledge on how Twitter serves as a platform for people to convey social support after a non-celebrity’s death. Second, using the case of the Fallen44, this study sheds light on how online social support is conveyed in Asia,
particularly in the Philippines. It is interesting to note that there are few Twitter-related studies in the Philippines even though it was ranked tenth globally in terms of active Twitter users.46 Through the results of this study, scholars can get a glimpse of how Twitter is used outside Western countries. Third, this study demonstrated how a hybrid coding approach can be used to optimize Cutrona and Suhr’s SSBC to classify tweets about a person’s death. We recommend that future studies follow our approach when using SSBC to classify social support messages in other contexts. Finally, the results of this study can inform counsellors and social support groups on how to use Twitter and other SNS to convey social support among people that are undergoing grief as the result of a person’s death.

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