Changes in Online Discourse of Suicide and Prevention after Robin Williams’ Death

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Background: Previous studies on celebrity suicide’s impacts took primarily an ecological approach and supported statistical correlations between the amount of media coverage of celebrity suicides and incidence of suicide. However, it is not clear how exactly celebrity suicide news affects public discourse and perceptions of suicide and related mental health issues.

Objectives: This study uses data mining on social media post of Robin Williams’ (RW) suicide as a case study of how online discourse of suicide and related issues change after celebrity deaths.

Methods:
We selected seven keywords that are related to this case, namely: “Robin Williams”, “suicide”, “depression”, “Parkinson’s disease”, “seek help”, “suicide lifeline”, and “crisis hotline.” Using DataSift, we sampled ten percent of all Twitter posts, or tweets, that contained one or more of these terms and were posted between six months before and after his death, yielding 1,749,287 unique tweets in English.

We examined the change in frequency of the seven keywords over time, and tracked by month the one hundred non-keyword words that appeared most frequently in the tweets matching each keyword.

Results:
Immediately after RW’s death, the number of online discussions covering the seven topics increased significantly, but then dropped significantly after one month (Fig. 1). The baseline of online discussion amount relating to “suicide lifeline” and “crisis hotline” appeared to be increased after RW’s death.

Online discourse relating to suicide, depression, and Parkinson’s death became more centered around prevention and seeking help after RW’s death (Fig. 2). However, these effects lasted no more than two months.

Next step:
Our next step analysis plans to focus on those tweets that are indicating suicidal thoughts or emotional distress, and examine how RW’s death changed the discourse among those tweets. To achieve the objective, we will first train a machine classifier that can classify whether a tweet is showing suicidal thoughts or emotional distress with acceptable precision and recall rates. We will include experts and crowdsourcing annotators in the loop to supervise a Support Vector Machine (SVM) to conduct the classification.

Conclusion:
RW’s death increased the online public’s awareness of suicide prevention. However, the impacts appear to be short-term. Our study illustrates the potential of social media as a powerful tool for the qualitative analysis of public discourse on suicide.