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Public Health Implications of #ShoutYourAbortion

Abstract

Objectives: Social media platforms such as Twitter allow members of the public to raise awareness for issues, causes, and events. This study investigated the hashtag #ShoutYourAbortion which was created in order to combat the stigma that can be associated with the medical procedure of abortion.

Study design: A mixed method and case study approach was utilised.

Methods: Twitter data was retrieved and analysed using social network analysis, a subset of tweets were qualitatively coded, and the location of tweets were examined.

Results: It was found that a sizable group of users shared tweets denouncing the hashtag and these users formed a cluster in themselves. The study also identified two narratives: anti-abortion and pro-abortion content.

Conclusion: The results have implications for public health organisations and agencies interested in devising digital health campaigns. That is, when devising health campaigns it is essential to consider the tone of the campaign and whether it is likely to provoke citizens whom may have opposing views. Moreover, future campaigns could communicate information surrounding the dangers of unsafe abortions, and the broad spectrum of reasons that women may seek abortion i.e., for instance where the child and/or mothers health is at risk.

Key words: Abortion, Twitter, Social Networks, Hashtags

Introduction

Abortion is the medical term for the removal of an embryo or fetus before it is able to live independently outside of the uterus [1]. The procedure of abortion has been influenced by social, political and medical perceptions for thousands of years [2]. In the United Kingdom, for instance, the legality of abortion has shifted over the years as once it was legal from the 13th century onwards it became illegal in 1803 due to fears over its safety [2]. In the United States common law applied, however, five out of 26 States had banned abortion by 1840 due to similar fears over its safety [2]. In the 20th century abortion as a medical procedure became safer and in the United Kingdom the *Abortion Act 1967* was passed which permits termination of pregnancy under 24 weeks noting that it is a safe procedure and because pregnancy can be considered to be more dangerous than not being pregnant [2]. However, in the United States abortion remains a controversial topic with moral, political, and religious influences.

Of the 55.7 million abortions that had taken place from 2010 to 2014 Ganatra et al [3] estimate that 54.9% (30.6 million) of these abortions were safe, 30.7% (17.1 million) were less safe, and 14.4% were least safe (8 million). This means that between 2010 and 2014 that 45.1% of abortions were unsafe with 97% (24.3 million) of these deriving from developing countries. One factor which influences whether a country has safe or unsafe abortion relates to the legality of abortion because if access to safe medical procedures are not present then unsafe means may be pursued. The legality of abortion can be influenced by political and/or religious motivations. If lack of access to safe medical procedures leads to unsafe abortions then it is important for public health organisations to raise awareness for the importance of safe access to the abortion procedure.

Women who have an abortion may feel a sense of societal stigmatism. One way of combating stigmatism is to raise awareness among the general public outlining the factors that can go

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into the decision. Social media platforms have emerged as important communication devices in the 21st century and serve as public facing platforms for members of the public to share views, thoughts, and opinions. Twitter's potential for public health research has been well established [4]. One aspect of social media which has gained attention in recent years is its ability to raise awareness via the use of hashtags a term known as *hashtag activism* [5]. Twitter is a fruitful platform for this purpose because it contains a wealth of users because it reports as having 316 million monthly active users, there being 500 million tweets per day, and 80% of active Twitter users using a mobile device [6]. In the area of health Twitter has been used to better understand swine flu [7, 8], Cardiac Arrest [9], Ebola [10], among other health related conditions. No previous empirical research has examined discussing surrounding abortion on Twitter.

On Twitter, hashtags go further than the act of tweeting and allow users to give their tweets more significance by linking to broader issues and campaigns. In order to achieve this hashtags are typically searchable and are denoted by the '#' symbol. Hashtags will link to a user's tweet which can be utilised to promote a campaign and/or trending topic on Twitter. In autumn 2015, the hashtag *'#ShoutYourAbortion'* was created by a pro-abortion campaigner because of a threat to end public funding to the American organisation Planned Parenthood, and the hashtag began to trend on September 23nd 2015 which meant it was likely to be more widely visible to users. The goal of the campaign was to raise awareness and remove the stigma that might be associated with the medical procedure of abortion. There were tensions on Twitter between users because some users felt that abortion was being glorified by the campaign whereas other users felt that the aim was not to glorify the hashtag, but rather, to aim to dismiss the stigma that can be attached to the procedure.

This is an important area to study because the hashtag #ShoutYourAbortion was trending on Twitter which means that it was potentially visible to all users who were logged on the

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platform and it has a global reach. This is because a list of trending topics are often displayed to Twitter users when they engage with the platform and the topics are updated in real time. Therefore, from a public health perspective it is important to develop a better understanding of how the medical procedure of abortion was received on Twitter.

Research Questions and Objectives

The research questions of this study were as followed:

- Can users on Twitter sharing information on the #ShoutYourAbortion hashtag shed light into the moral, ethical, and/or legal issues surrounding abortion?

- What distinct groups emerged when analysing the hashtag utilising Social Network Analysis?

- What themes appeared to be most popular related to #ShoutYourAbortion?

- What implications does the campaign have on public health research and future campaigns?

Methods

Methods of Data Retrieval for Social Network Analysis

A total of n=7,837 tweets were retrieved from Twitter using NodeXL [11] on the hashtag #ShoutYourAbortion. The tweets in the network were tweeted over the 3-hour, 0-minute period from Tuesday, 22 September 2015 (05:42) to Tuesday, 22 September 2015 (08:42). The Search API was utilised which provides a sample of tweets.

Methods of Data Retrieval for Thematic and Location Analysis

A total of n=150,549 tweets were retrieved from a licensed reseller of Twitter data via the Firehose API which is a complete record of all tweets. The data were retrieved from Friday September 19th (04:23:20) to Saturday September 25th (22:46:52). These tweets were entered into Nvivo [12] and coded until thematic saturation occurred [13]. Thematic saturation occurs

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when no new themes emerge when data is analysed. In order to plot geographical co-ordinates tweets which contained valid latitude and longitude were separated into tweets which were anti-abortion and those which were pro-abortion and were then plotted onto a world map.

Methods of Data Analysis

Social network analysis was utilised in order to retrieve tweets on and cluster Twitter discussion on #ShoutYourAbortion as shown in Figure 1. Tweets were then imported into Nvivo and classified in order to identify the central views that were shared on the hashtag. Thematic analysis was utilised using the 6-step coding methodology suggested by Braun [14].

Ethical Statement

The study met internal ethical guidelines. Secondary data was analysed as part of this study, more specifically, the data used in this study was publically available tweets from Twitter users who had consented via Twitter's terms of agreement to make tweets available publically. The user-handles of Twitter users were stripped out during the qualitative analysis phase, and any tweet extracts provided in our study were anonymised in order to prevent identifying individual users. Thus, no attention was drawn to individual users, and data were kept securely. Moreover, the dataset consisted of tweets from a hashtag, and it can be argued that users who post using a hashtag will be aware their tweets will be visible more widely and would feel comfortable in sharing their views.

Results

Results of Social Network Analysis

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Figure 1 below is a social network graph created using NodeXL. The graph represents a network of 7,837 Twitter users whose tweets contained "#ShoutYourAbortion", or who were replied to or mentioned in those tweets, taken from a data set limited to a maximum of 18,000 tweets from Tuesday, 22 September 2015 (08:52) UTC. The three groups of interest are group 1, group 2, and group 3. The graph shows how clear clusters emerge (i.e., group 1 and 2) which highlights how the two viewpoints of pro-abortion and anti-abortion were distributed almost in equal terms.

Figure 1 – Social Network Analysis Clusters

Figure 1 above demonstrates that when discussion on Twitter was analysed using NodeXL a number of distinct groups emerged where users shared similar views. NodeXL clusters discussion on user follow and following relations, that is to say, it looks at which users follow each other and examines the types of tweets they send in order to cluster discussion into distinct groups. The key groups which is the focus of this study relates to group 1, group 2, and group 4. In group 1 discussions centred on users sharing pro-abortion views towards abortion, group 2 consisted of users whom were sharing anti-abortion views, and in group 4 users drew parallels with abortion as a murderous act.

Results of Thematic Analysis

It appeared that discussion on Twitter was centred around two ways of viewing the abortion debate. Twitter users were either expressing views belonging to the anti-abortion viewpoint i.e., that life is sacred and these users may campaign against the practice of abortion as well as its legality. The other sizeable cluster of discussion derived from Twitter users whom were pro-abortion i.e., that it is for individuals to decide whether to opt for an abortion and these users may have campaigned for the legality of induced abortion services. These themes and anonymised quotations are outlined next, and location maps are also provided where each point on the map refers to a tweet.

Theme - Pro-abortion

There were a number of users that were in support of the hashtag and the movement. Twitter users in support of the hashtag insisted that the drive behind creating it was to remove some of the stigma that can be attached to the procedure rather than to glorify the procedure in of and within itself.

There were a number of tweets which were sent in general support of the hashtag:

'I will not apologise for my abortion, and I am not whispering #ShoutYourAbortion'

In similar motivation a Twitter user noted:

'Women should not be disgraced into silence #ShoutYourAbortion'

Other Twitter users would share their personal experiences for why they opted for an abortion:

'My abortion led to happiness [URL] #ShoutYourAbortion'

Twitter users also noted that citizens opposed to abortion should keep interest in their own matters:

' If abortion gets you upset – just don't have the procedure done. Mind your own business!

#ShoutYourAbortion.

Twitter users clarified the purpose of the hashtag:

'#ShoutYourAbortion is about trying to remove the stigma that may be attached to abortion

rather than to glorify the procedure'

Other Twitter users noted that:

'There are millions of unsafe abortions each year. We should certainly shout

#ShoutYourAbortion.

The figure below displays Twitter users that were tweeting using the hashtag anti-abortion.

Figure 2 – User Location for Pro-abortion

The figure above highlights that the hashtag was of interest to a global audience who supported the pro-abortion movement as it drew tweets from the United States, West Africa,, United Kingdom, and Australia.

Theme - Anti-abortion

The users expressing this view derived from group 2 and also appeared in group 4 where certain Twitter users contrasted abortion to the act of murder. For example, a Twitter user noted:

"I don't want to sound crazy, but I don't think abortion is something we need to be proud of #ShoutYourAbortion"

There were certain Twitter users who were more intense with their vocabulary:

'For any female who has had an abortion I'm sorry for the loss that you have uncured – I'll mourn your innocent child #ShoutYourAbortion'

There were certain users who were unpleased and had become negatively affected by the hashtag:

'Painful trying to read through #ShoutYourAbortion – I think it is sick that a mother would be proud of such as procedure'

One interpretation of these tweets is that certain users had misunderstood the main purpose of the hashtag which was to raise awareness of and support women who may have to undergo the procedure rather than be proud of the action *per se*.

There were also Twitter users whom directed ad hominem attacks on women who supported abortion:

'Those women who are supporting abortion are just like people who used to have slaves and defend having slaves'

Other users would suggest that women should instead opt for adoption rather than for abortion:

'Instead there should be a #ShoutYourAdoption hashtag which is trending'

There were Twitter users who drew parallels of abortion to murder:

'Scumbags have started this hashtag! It's not ShoutYourAbortion it is in fact ShoutAboutMurder

It appeared that Twitter users were displeased with the #ShoutYourAbortion movement and users would indicate their disbelief in the hashtag:

'Could you imagine a world where people are proud of killing other humans…oh wait '

The figure below provides a visual representation of the location of the Twitter users that were tweeting using the hangtag and which fall in the anti-abortion category.

Figure 3 – User Location for Pro-Abortion

The figure above displays the locations from which tweets related to the *anti-abortion* theme were expressed and highlights how tweets derived from across the United States and West Africa. Interestingly, tweets appeared to derive from geographical areas which were also pro-abortion indicating disagreements towards abortion among citizens at the local level.

Popular Content

The table below provides an overview of hashtags that were most popular identified as a by-produce of social network analysis.

Table 1 – Overview of Most Used Hashtags

It is not surprising to see that the most popular hashtag was 'shoutyourabortion' because this was the hashtag utilised to retrieve data. It appears that certain hashtags such as 'oneletteroffsongs', and 'worldrhinoday', for instance, were not related to the subject matter. There is further evidence that the hashtag was denounced by certain users as rival hashtags

appeared to be shared on Twitter during this time such as 'shoutyouradoption', 'shoutyourmurder', 'prolife', and 'praytoendabortion'.

Top Websites

The table below provides an overview of websites that were found to be most popular identified using NodeXL.

Table 2 – Overview of Most Shared Websites

It appeared that the majority of websites appeared to be based on covering the #ShoutYourAbortion article (rank 1-3, 5, and 10). A tweet which was quoted often and consequently appeared as a popular URL was critical towards the hashtag. Other websites were based on showing how the hashtag was trending (rank 6), promoting a Firefox add-on (7), and tweets which were inaccessible (9). Interestingly, a website which was popular at the time link to a website which provided support to women who had undergone an abortion.

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Discussion

Social media platforms have fundamentally changed the way citizens communicate among themselves and it has had a profound effect in how health is promoted. Previous empirical research has noted how social media websites such as YouTube, Facebook, MySpace, and Twitter have emerged as popular sources of health information especially for teenagers and young adults [15]. Since the beginning of the Internet from the latter parts of the 20th century the number of citizens with Internet access has risen sharply from the low millions to the billions [16]. Moreover, over this time, social media have become a normal part of life for society which involve many actors ranging from citizens, government, activists, and non-governmental organisations. The aim of this study was to examine the discussions that were taking place on Twitter related to #ShoutYourAbortion. It was found that discussion clustered into a number of central groups. The most interesting of these groups was comprised of one which was termed *pro-abortion* and another which was *anti-abortion.* The groups were distinct indicating that users either belonged to either of the polarised groups (group 1 or group 2). The groups are clearly defined which means that the users among the groups were already connected with others in the same group on Twitter i.e., that they followed each other and may have shared similar views. Twitter users who reacted angrily to the hashtag may have held strong views against abortion for either moral, political and/or ethical issues. This is further evidenced by the fact that Twitter users would draw parallels with the act of abortion to murder. These findings indicate that abortion remains a contentious issue with disagreements across the globe. An implication of these findings for public health organisations is that when devising health campaigns that it is essential to consider the tone of the campaign and whether it is likely to provoke citizens whom may have opposing views. Moreover, for further awareness work related to the medical procedure of abortion, in both digital and traditional marketing messages, may be to communicate information surrounding

the dangers of unsafe abortions, and the broad spectrum of reasons that women may seek abortion i.e., for instance where the child and/or mothers health is at risk. This is because it appeared that the hashtag drew misunderstandings among certain Twitter users who felt that it was glorifying the medical procedure of abortion. However, it could be argued that these Twitter users had ulterior motives because they themselves belonged to the pro-abortion group of users. The hashtag appeared to split opinion and led to misunderstanding between pro-abortion and anti-abortion users, thus, it would not be advisable for health authorities to engage with the hashtag. However, it may have been useful for health authorities to understand the views of Twitter users put forth by pro-abortion and anti-abortion campaigners in order for this to feed into the devising future health campaigns. The study was limited because it analysed Twitter content and did not interview and/or survey users. Further research could seek follow up with the users during the camping for more in-depth interviews. One of the limitations of utilising geo data from Twitter is that only a handful of tweets (i.e., 1% or under) will contain valid latitude and longitude information, and in this study it was found that very few tweets contained this information. In regards to ethical practicalities, because abortion is a sensitive topic this study carefully re-worded tweets in order to remove the possibility of identifying participants and ensured network visualisations did not draw attention to specific groups and/or users. However, it must be noted only tweets which were publically shared on the #ShoutYourAbostion hashtag were utilised in this study. Twitter itself is not representative of the national offline population, therefore, the views expressed by users cannot be generalised to the offline population. Moreover, it could be argued that the Twitter users who were interested in this hashtag had a specific interest in the topic and thus the discussion could reflect views of campaigners rather than Twitter users in general. In recent years, social media platforms have seen a rise in automated accounts which may generate content which may be controlled by certain groups or individuals. Therefore, it

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is possible that automated algorithms could be programmed and which could have generated content on behalf of either the pro-life and anti-abortion viewpoints.

Conclusion

Whilst Twitter can be used to raise awareness of certain health events and topics, it appeared that in the case of #ShoutYourAbortion the campaign split opinion on Twitter. The study highlighted how Twitter served as a useful lens to examine current public views and opinions, as expressed on twitter, towards and against abortion.

Author Statements

There is no funding and/or competing interest for this study.

Secondary data was analysed as part of this study, therefore, ethical approval was not required. This is because the study was conducted by a social media organisation and not a university, thus, institutional review ethical approval was not possible to gain. However, the study did meet internal ethical guidelines and followed best practice guidelines for social media research.

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Table 1 – Overview of Most Used Hashtags

Rank	Total Occurrences	Hashtag
1	18073	shoutyourabortion
2	1445	oneletteroffsongs
3	1379	futurebelfast
4	858	worldrhinoday
5	392	shoutyouradoption
6	331	shoutyourmurder
7	174	prolife
8	167	istandwithpp
9	153	prochoice
10	135	praytoendabortion

Table 2 – Overview of Most Shared Websites

Rank	Total Occurrences	Website Type
1	90	Article covering #ShoutYourAbortion
2	65	Article covering #ShoutYourAbortion
3	57	Article covering #ShoutYourAbortion
4	39	Tweet negative towards the hashtag
5	34	Article covering #ShoutYourAbortion
6	29	Trending topic website
7	28	Firefox ad-on website
8	27	Support website for abortion
9	25	Tweet inaccessible
10	22	Article covering #ShoutYourAbortion

Figure(s)

Figure 1 – Social Network Analysis Clusters

G1: shoutyourabortion abortion women choice u woman pro one people never

Pro-abortion

G2: shoutyourabortion abortion destroying child women humans eggs felony twitter life

Anti-abortion

G3: shoutyourabortion abortion choice trending women hashtag people pro life right

G4: shoutyourabortion abortion murder woman proud people themathews04 killed babies pregnant

Abortion as murder

G5: shoutyourabortion abortion life women choice hashtag child people trending pro

G6: shoutyourabortion abortion http one giannajessen medical records born during saline

G7: shoutyourabortion abortion women health choice abortions hashtag pro life mother's

G8: twitter shoutyourabortion fake account please report support onsleticedtfsongs futurebeliter mwwipkt

G9: pro ant life shoutyourabortion shou anyone healthcare social war-bans

G10: shoutyourabortion abortion stigma challenging hashtag buzzfeed women blackmon need

G11: shoutyourabortion women abortion shout hashtag h...

G12: shoutyourabortion feminisigals islandwithop

G13: shoutyourabort

G14: shouyouteb

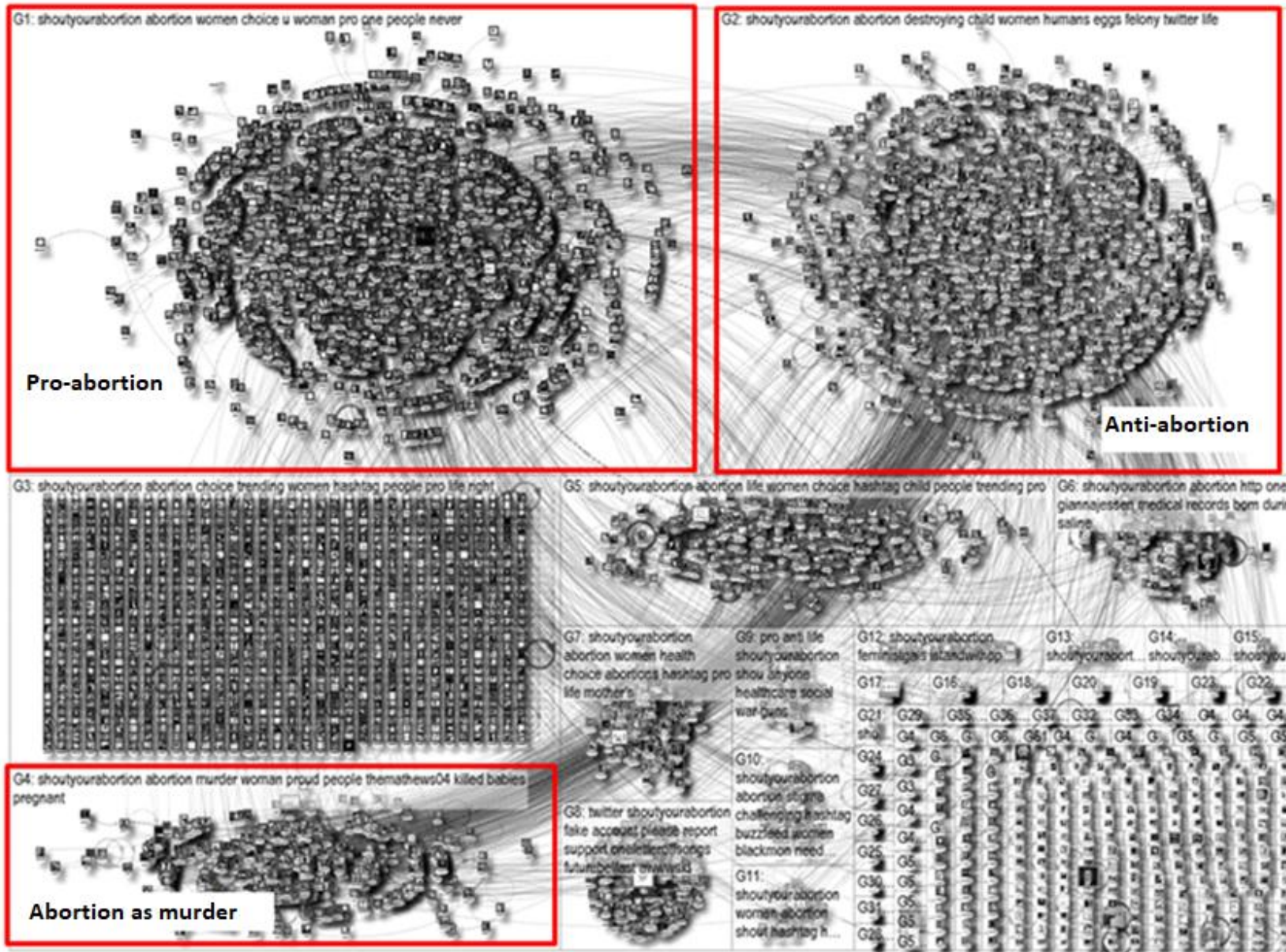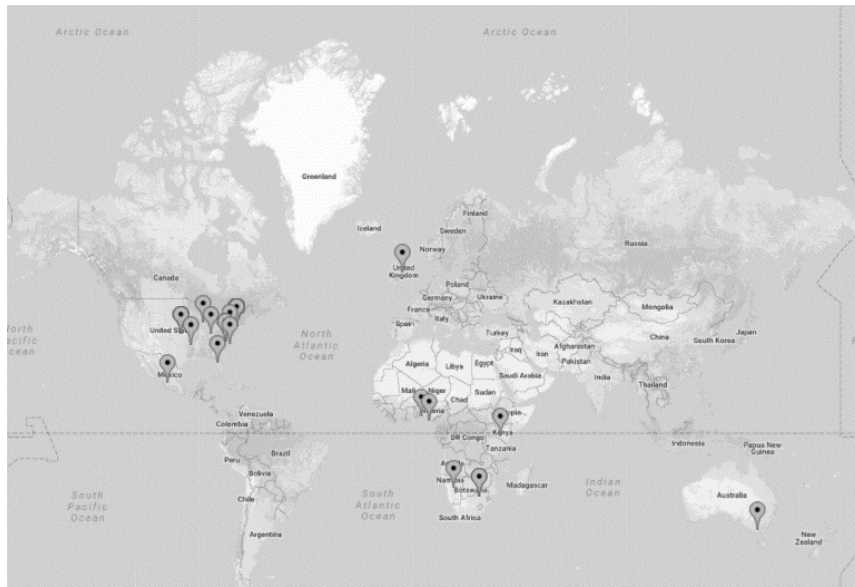G15: shoutybu

Figure 2 – User Location for Pro-Abortion

Figure 3 – User Location for Anti-Abortion

Highlights

- The viral hashtag #ShoutYourAbortion was denounced by Twitter users who were against the hashtag.
- Discussion on Twitter was either was pro-abortion or anti-abortion.
- The campaign was not met well by some users & rival hashtags were created such as #ShoutYourAdoption
- Our study outlines implications for health organisations in devising digital health campaigns.