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Identifying People's Reactions and Concerns During the 2022 International Women's Day on Twitter: Sentiments Analysis Through Hashtags.

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Abstract

This paper presents research results on people's reactions and concerns during the 2022 International Women's Day on Twitter as an electronic platform for amplifying women's voices. We coded and analyzed the most common themes from unstructured tweet textual data using MAXQDA2022. The analysis was done based on the global slogan used to celebrate the Women's Day in 2022 - "Gender equality today for a sustainable tomorrow #IWD2022". More than 5,000 tweet and retweet postings comprising 2022 IWD peoples' sentiments, opinions, and comments were examined using content analysis approach. Six themes — surveillance, prevention, treatments, testing, and cure, symptoms and transmission, fear, and financial loss — were identified as key concerns during the 2022 IWD. Majority of the 676 Women's Day-related tweets gathered were advocating about breaking the bias. The overall percentage of sentiments regarding the 676 International Women's Day in Tanzania was positive by 44.9%, negative by 1.1% and neutral by 18.5%.

Keywords: 2022 international women's day, twitter, sentiment analysis, hashtags, reactions, concerns

1. Introduction

1.1 Essence of the International Women's Day

The international Women's Day (IWD) is conventionally celebrated on 8 March every year (UN, 2022). It is a day in which women from around the world join in thoughts, prayers, struggles, hopes, and dreams, in addition to thanking those who have made our world a better and stronger place through educational, business, scientific, artistic, medical, public service, and athletic achievements. Hence, IWD brings people together to recognize the achievements that women and girls have made, as well as call for further action to close gender gaps — in pay, work, education, and other life opportunities.

In her book, Cote (1984) notes that the women's movement began in May 1908 when 15,000 women met at the Garrick Theater in Chicago to demand political and economic equality for all women. These women denounced the oppression and exploitation of women, and demanded women be given the right to vote. In 1909, the first National W4man's Day was held in the United States on February 28 in homage to the 1908 garment workers' strike in New York. It was a day dedicated to women's suffrage and the press was referred to as "women's suffrage".

During the Copenhagen international socialist meeting held in 1910, Luise proposed that Women's Day become an annual event (Kaplan, 1985). This idea was seconded by Clara Zetkin whereby 100 women from 17 countries collectively agreed with her proposal, even though, no date was decided (Kaplan, 1985). Building on such acceptance, Luise on 28 August 1910 proposed in a German newspaper article, that the general theme of the struggle should be women's suffrage. Kaplan (1985) reports that about 300 women's rallies advocated by men and socialist delegates in the Austro-Hungarian empire were witnessed. The 1911 fire occurred at Triangle shirtwaist factory in New York killed about 147 workers, most of them being the immigrants (Kaplan, 1985).

Scholars have demonstrated that media have played an important role in unfolding women's concerns particularly on issues related to gender-based violence (Carter, 1998) and speaking out about their social, cultural, and political-related concerns (Serisier, 2018). Ranging from newspapers, radios, televisions, blogs; twitter remains to be a powerful microblogging social media site to exchange information quickly and directly about women's social, cultural, economic, and political concerns, such as gender-based and domestic violence during the IWD2022 event.

The gender-based and domestic violence has affected at least one in three women worldwide at different levels and at some point, in their lives (Evans *et al.*, 2020). The sentiments portrayed annually through IWD do show the women's on-going fight against GBV and other domestic violence. The GBV and domestic violence remain to be the serious public health concern influenced by several psychosocioeconomic factors (Schmidt and Willis, 2007). According to Schmidt and Willis (2007), the word "psycho-socioeconomic" refers to the fusion of psychological, sociological, and economic elements affecting a person's immediate surroundings. Studies show that less than 40% of GBV and domestic violence victims seek assistance, despite the existence of numerous helplines, NGOs, and shelters.

The IWD2022 information available publicly on Twitter was used in this study to analyze people's reactions and concerns via their sentiments as emerged during the IWD2022 celebration in Tanzania. The primary goal was to establish the contribution of twitter in celebrating women's achievements, raising awareness about women's equality, and lobbying for accelerated gender parity. The IWD2022 campaign theme was "Gender equality today for a sustainable tomorrow". IWD2022 aimed to recognize and celebrate the women's and girls' contribution around the world based on their responsibility for adapting, mitigating, and responding to global climate change as a way of building a more sustainable future for all. Generally, the IWD2022 was geared to highlighting the importance of challenging biases and misconceptions to create a more inclusive and genderequal world. Hence, twitter was selected as best platform to address such issues in IWD2022 celebrations.

Indeed, the proliferation of technological innovations has facilitated various groups in the society to be online and share their feelings and concerns. The establishment of twitter has accordingly created a forum where users may voice their thoughts. Thanks to these new technologies, it is now conceivable to conduct research on the opinions expressed or identify the crucial elements that are of particular interest to a given cluster of global community, all of which benefit both users and the institutions as they offer agenda of actions in response to these issues.

Theoretically, an increase in hashtag activism – the activism that focuses on the use of a defined hashtag (- a term used in the body of a post as a filtering mechanism) in social media to identify one's message or participation in a campaign - has augmented spaces for different social groups as means of

mobilizing people to become aware of a particular cause^{1.} Today, social media, twitter in particular, has empowered women to create their thematic campaigns online whereas millions of people all over the world participate annually.

Hashtags are usually written with a preceding hash (or strike) symbol, e.g., #BreaktheBias (the hashtag theme for International Women's Day 2022). The hashtag clicking lists other posts that have used the same hashtag in their content. Hashtag filtering, on the other hand, allows participants to listen to discourse on a specific topic or issue. Hashtags are not determined in advance; thus, anyone can generate a hashtag for whatever reason, and deploy it in twitter for specific use. Some hashtags are basically used to demonstrate solidarity, and they seek to unite people around the world against a perceived common enemy.

The hashtag activism helps to increase awareness and create an avenue for continued engagement which is significant for any cause like women and children domestic abuse. Therefore, it can be contended that hashtag remains to be a vital symbol that makes people to gather (as social movement) behind it as an alternative way of throwing their sentiments out there – providing a chance for their arguments to be interpreted as part of a larger dialogue through social movement in twitter. It is through this movement; the hashtag then becomes a symbol of empowerment; whereas any such social movement emerging and taking place through social media is referred to as digital activism (Gill & Orgad, 2018; Mendes & Ringrose, 2019) or cyberactivism (Carty & Barron, 2019). Some scholars such as Xiong et al. (2019) consider such social-based movement as hashtag activism because it uses hashtags to blowout information and actions.

Subsequently, the key objective of this exploratory study was to find out the public reactions and concerns during the 2022 International Women's Day on Twitter, particularly the reasoning as to why gender-based violence against women and children is still on the rise. So far, there has been little discussion about women's digital activism and the public's feedback regarding the IWD 2022. A widespread hashtag that was shared across the global twitter users was the #BreaktheBias.

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¹ Digital activism. Accessed on 14/09/2022 online from https://granite.pressbooks.pub/comm601/chapter/digital-activism/

The study concentrated on the contents and patterns of concerns and reactions in the IWD 2022 hashtag/digital movement. It aimed to dig more into the public's sentiments on the information shared in the #BreaktheBias campaign. Due to its straightforward and simple-to-follow ethical procedure in data use for research, the study restricted its scope to only Twitter platform. Based on its policy, Twitter typically permits Application Programming Interface (API) users to gather public data, or information that users choose to post publicly. In other words, the study relied on gathered tweets posted publicly by users who accepted the Twitter's fair use policy statement (https://help.twitter.com/en/rules-and-policies/fair-use-policy) and who acknowledged that Twitter is a public platform where anybody may access and search tweets instantaneously.

Twitter was selected due to its merit of having information that are immediately searchable and viewable by anyone around the world. Twitter also has the benefit of limiting people to 280 characters, which allows for a more focused critique. Although using Twitter as research data does not pose a significant privacy risk, some have highlighted concerns about the prevalent expectation of anonymity among Twitter users (Williams *et al.*, 2017). As a result, data collection in this study started by employing standard reporting approach whereas the summarization of tweet contents (sentiments analysis) was done rather than reproducing the direct quotes of the tweets.

2.0 Methodology

2.1 Data collection

The goal of study was to examine how IWD 2022 tweets may become an important social movement to raise awareness (Pew Research Center, 2019; Manikonda *et al.*, 2018) and encourage actions against gender-based violence among women and children in Tanzania. Therefore, the present research aims to answer the question "how twitter users' sentiments described their traumatic concerns and reactions during the International Women Day 2022 event?". Using MAXQDA2022 and Twitter API, tweets were retrieved using the hashtag #IWD2022 whereas all hashtags associated to this main tag (e.g., #BreaktheBias) were also retrieved. Initially, the sample included 1,248 tweets and retweets, but after removing retweets and tweets that did not have interpretable contents and those which did not involve IWD 2022 content (i.e., not closely related to the research question), the final sample was reduced to 676. The public's concerns and reactions were retrieved based on whether their tweets focused on the following related hashtags: IWD2022, BreakTheBias, breakthebias2022, IWD Connect and IWD, International Womens Day 2022. Only tweets that met these

hashtags were included in the final sample. Retweets were detached because they were considered as duplicate contents that would not enrich the findings (Palomino *et al.*, 2016). In the final selected sample (Figure 2), most of the tweets came from the MISA TANZANIA (55.3%), with the rest spread over Pact Tanzania (5.6%), The Aga Khan Hospital, Mwanza (5.3%), SCaRO ACT Wazalendo (4.2%), The Citizen Tanzania (4.2%), FastHub Solutions (3.2%), Plan Tanzania (3.2), UNFPA Tanzania (2.8%), WFP Tanzania (2.8%), CDCTanzania (2.5%), Kassala (2.5%), Amriya Issa Yahya (2.1%), Dar es Salaam Merchant Group (2.1%), Feed the Future (2.1%) and United Nations TZ (2.1%).

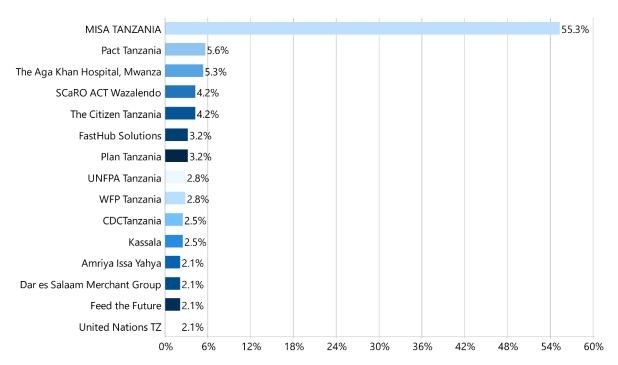


Figure 1 – The extracted sample from the Tweets (Source: Author)

2.2 Data Analysis

Thematic analysis was used in this study. All retrieved twitter data were imported into MAXQDA where and were evaluated according to several criteria, including word frequency, hashtags, authors, and sentiments. Thematic analysis is beneficial for identifying patterns in qualitative data, primarily when the research aims to extract the experiences and meanings of the participants. In other words, thematic analysis is a "realist method" (Braun & Clarke, 2006, p. 9) that helps to reflect the reality of the Twitter users, particularly how they make meaning of their experiences and how they interpret such experiences. Thematic analysis was utilized in developing coding categories, whereas all identified themes were documented based on the frequency of the codes that were used to code the tweets.

In this study, thematic analysis aimed to understand how the public expressed their concerns and reactions to the hashtags and emerging issues during the IWD 2022. This study, therefore, executed 100 key words to identify among others the hashtags, reactions, slogans, and other key issues surrounding the selected IWD 2022using MAXQDA word cloud (Figure 1) whereas all frequently identified words are comparatively bigger in visibility.



Figure 2 – Word cloud for key Twitter emerging issues during the IWD 2022 (Source: Author).

During coding, the following codes were identified and further analyzed: promote women's leadership; men and women have equal rights; inequality is a major challenge in Tanzania; customary norms in rural areas are still biased against women; women work an average of 62.3 hours/week; many women have low literacy levels; many women have limited control over household income; lack of decision-making authority; discrimination is embedded in customary laws, social norms, and practices; challenge gender stereotypes and bias as a struggle to gain property rights; women and girls need to be mobilized into groups for collective action; increased women investment in agriculture generation equality for sustainable development, and narrowed gender disparities in out-of-school children. Using Braun and Clarke's (2006) technique, all codes were thematically analyzed based on the selected themes related to IWD 2022 celebration.

3. Results

3.1 Frequently tweeted hashtags (#)

The #iwd2022 and #BreaktheBias hashtags were the recurring themes across all tweets (n = 676) during the celebration of IWD 2022 in Tanzania. It was noted that the frequently tweeted hashtag was iwd2022 (28%) followed by the #breakthebias (22.4%). Others were #iwd (11.4%) and #tanzania (8.1%). More information on the tweeted hashtags with their percentages are presented in Figure 3. The implication represented by women's hashtags is best summarized through sentiments analysis.

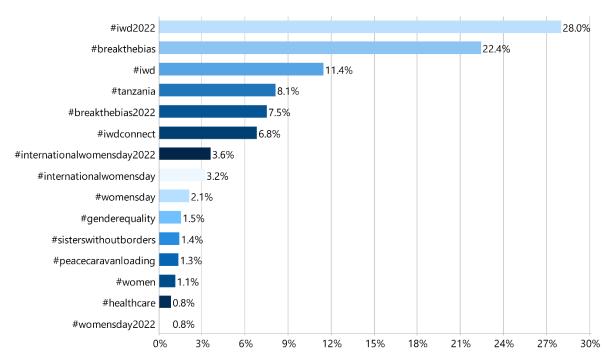


Figure 3 – Emerging hashtags during the International Women Day 2022 in Tanzania (Source: Author).

3.2 Sentiments Extraction

The study used psycholinguistic lexicon to characterize and compare the type of concerns and reactions expressed on twitter platform during the IWD 2022. The twitter users' emotional behaviours were identified to acquire the research data: emotionality focused on whether the public reacted in positive, slightly positive, neutral, negative, slightly negative towards the emerging issues during the IWD 2022 as represented by the tweets and hashtags. The results concerning public's reactions and concerns through twitter sentiment analysis show that, 44.9% was positive, 33.1% slightly positive, 18.5% neutral, 2.2% slightly negative, and 1.1 negative. towards the women voices expressed through hashtags and tweets. This might be due to the public's awareness regarding the women's concerns towards various issues related to gender-based violence, equality, and leadership positions. Sentiment analysis indicates that the public was very positive (44.9%) on the women voices during the IWD 2022. Considering twitter platform exclusively, the ratio of positive to negative posts on the IWD 2022 hashtags showcase the presence of positivity towards the women movement's concerns (Figure 4).

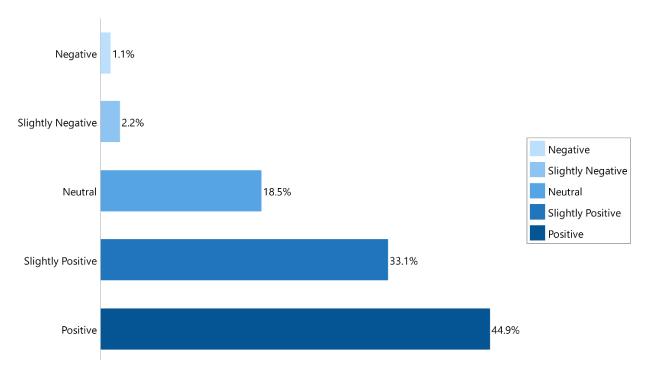


Figure 4 – Twitter sentiments analysis (Source: Author)

4. Discussion

The findings obtained from this research indicate that when women share their voices and concerns on social media, particularly on twitter they also unveiled their traumatic experiences. The research aimed to establish how the public expressed their concerns and reactions to the hashtags and emerging issues during the IWD 2022. Women during the International Day in 2022 addressed and shared their traumatic experiences through twitter hashtags (e.g., emotional distress, rights to education after giving birth, health issues, gender-based violence, etc.) and the strong feeling of powerlessness that they experience in their life. Women movement through twitter also created the milieu that brough in the unspoken topics and issues that were embedded in the hashtag descriptions. All these were intended to show the public that women still demand the protection against unacceptable cultural traditions as well as bringing light and educate the public about the reality of traumatic experiences facing majority of women in Tanzania society.

The study findings further suggest that public actively engaged in the IWD 2022 celebration and there is a growing acceptance of the women's claims, concerns and cry as regards to their rights. Women were able to express their views on political power-related issues, and their capability if they are given chance to serve

in various top positions. Through hashtags analysis, women had shown that they are very far in terms of education attainment and leadership roles whereas President Samia Suluhu was mentioned through tweets as their role model. The findings from this study inveterate the previous research findings (for example by Sills et al., 2016) that when social media is employed as a platform to voice out minorities' concerns, may act as a good teacher and awareness tool to the general public.

1. Conclusion

This study has demonstrated the prevalent use of Twitter by women during the International Day of Women 2022 with the aim of expressing their traumatic experience in their life has awakened the public to support their movement as established by the positive sentiments. The public reactions and concerns are in line with the women presented key issues through various hashtags of the IWD 2022 whereas majority of the tweets were 'positively' supported by the public. Twitter may signify a powerful tool for IWD annual event for women to rapidly communicate with the public when anticipating airing out their voices on specific issues.

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