## **UC** Irvine

# **UC Irvine Previously Published Works**

## **Title**

Intimate Partner Violence on Instagram: Visualizing a Public Health Approach to Prevention

## **Permalink**

https://escholarship.org/uc/item/1619x5gg

## **Journal**

Health Education & Behavior, 46(2\_suppl)

## **ISSN**

1090-1981

## **Authors**

Carlyle, Kellie E Guidry, Jeanine PD Dougherty, Sharyn A et al.

## **Publication Date**

2019-12-01

#### DOI

10.1177/1090198119873917

## **Copyright Information**

This work is made available under the terms of a Creative Commons Attribution License, available at https://creativecommons.org/licenses/by/4.0/

Peer reviewed



Article



Health Education & Behavior 2019, Vol. 46(2S) 905–96S
© 2019 Society for Public Health Education Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/1090198119873917 journals.sagepub.com/home/heb

(\$)SAGE



Kellie E. Carlyle, PhD, MPH<sup>1</sup>, Jeanine P. D. Guidry, PhD<sup>1</sup>, Sharyn A. Dougherty, MPH<sup>1</sup>, and Candace W. Burton, PhD, RN<sup>2</sup>

#### **Abstract**

Social media platforms like Instagram are often used as venues for discussing relationships, making them ideal channels for promoting healthy relationships and preventing intimate partner violence (IPV). This is particularly relevant for IPV, which has been historically understood as a personal issue and lacked support for consideration as a significant public health issue. To explore a potential platform for IPV prevention, this study examines the ways in which IPV messages on Instagram reflect public health understandings of, and approaches to, prevention and how Instagram users engage with these posts. We analyzed 700 Instagram posts about IPV using the social ecological model as the theoretical framework for conceptualizing framing devices. Posts that mentioned individual causal attribution and individual solution responsibility were both present in the majority of posts and elicited more engagement than posts that did not. Encouragingly, the Instagram sample was more reflective of a range of different types of IPV experiences than previous analyses of traditional media content, possibly indicating that a public health approach to this issue is gaining traction.

#### **Keywords**

e-health, health communications, quantitative methods, social ecological model, social media, theories, violence and victimization

The Google Play Store (2018) describes Instagram as a "way to capture and share the world's moments." For approximately 1 in 3 women worldwide, these moments include intimate partner violence (IPV; World Health Organization, 2018). The Centers for Disease Control and Prevention (CDC) defines IPV as "physical violence, sexual violence, stalking and psychological aggression, including coercive tactics, by a current or former intimate partner (i.e., spouse, boyfriend/girlfriend, dating partner, or ongoing sexual partner)" (Breiding, Basile, Smith, Black, & Mahendra, 2015, p. 11). Increasingly, researchers are turning to social media to better understand health issues, including IPV (Carlyle, Guidry, & Burton, 2018; Cole-Lewis et al., 2015). These "infodemiology" or "social listening" approaches are unobtrusive ways to assess risk and protective factors that constrain or facilitate healthy behaviors and provide formative data for developing effective public health prevention campaigns (Cole-Lewis et al., 2015). Because there is a high level of Instagram use among populations affected by IPV, it is important to know the ways in which IPV is portrayed on Instagram. As such, this study examines IPV posts on

Instagram for the ways in which they may promote or hinder a public health approach to IPV prevention.

## **Intimate Partner Violence**

IPV is a public health crisis that accounts for 15% of all violent crimes, with 76% of these incidents perpetrated against women (Truman & Morgan, 2014). IPV victimization can have reproductive, physical, social, and psychological consequences, including unintended pregnancy, pregnancy complications, sexually transmitted diseases, chronic pain, hypertension, anxiety and posttraumatic stress disorder, social isolation, and suicidal behaviors (Centers for Disease

#### **Corresponding Author:**

Jeanine P. D. Guidry, Richard T. Robertson School of Media and Culture, Virginia Commonwealth University, 901 W. Main Street, Richmond, VA 23284, USA.

Email: guidryjd@vcu.edu

<sup>&</sup>lt;sup>1</sup>Virginia Commonwealth University, Richmond, VA, USA <sup>2</sup>University of California Irvine, Irvine, CA, USA

Carlyle et al. 91S

Control and Prevention [CDC], 2017b; McLean & Bocinski, 2017; Truman & Morgan 2014; World Health Organization, 2013). Furthermore, the economic burden of IPV costs associated with health care and lack of productivity is more than \$9 billion per year (McLean & Bocinski, 2017).

A public health approach to IPV prevention begins with understanding the scope of the problem and identifying risk and protective factors (CDC, 2018). More specifically, the CDC (2018) uses the social ecological model (SEM) as a framework for understanding the interactions between risk and protective factors at the individual, relationship, community, and societal levels that may facilitate or constrain health behaviors. In the case of IPV, many of these factors are associated with risk of both victimization and perpetration. At the individual level, risk factors include childhood exposure to IPV, low self-esteem, economic stress, a hostile or aggressive personality, depression, poor behavior control, and desire for control and power in relationships (Capaldi, Knoble, Shortt, & Kim, 2012; CDC, 2017a). Interpersonal risk factors include possessiveness within a relationship, unhealthy family relationships, and social isolation (CDC, 2017b). Community-level factors include poverty and high unemployment, poor neighborhood support, and unwillingness of neighbors to intervene during IPV incidents (CDC, 2017b). Societal factors include gender inequality, social norms supportive of aggression and violence, income inequality, and social structures that disadvantage communities at social, economic, or health levels (CDC, 2017b). Protective factors that may help prevent IPV include strong relationships with friends and family, social support, coordination of community resources, and neighborhood collective efficacy including community cohesiveness and willingness to intervene (CDC, 2018). Many of these risk and protective factors are influenced by communicationparticularly mediated communication—which can help shape socialnorms, model healthy relationships, and challenge victimblaming messages (Carlyle, 2017), making the SEM a useful framework to guide social listening approaches.

# The Influence of Media on Public Understandings of IPV

Numerous studies demonstrate the power of the media to influence public perceptions of IPV and whether it is viewed in a public health context, or simply as an interpersonal, private issue with implications for the criminal justice system (Carlyle, 2017; Carlyle, Orr, Savage, & Babin, 2014; Palazzolo & Roberto, 2011; Savage, Scarduzio, Harris, Carlyle, & Sheff, 2017). In their analysis of nationwide newspaper coverage of IPV, Carlyle, Slater, and Chakroff (2008) describe the ways in which the media frames IPV as largely an individual issue, ignores social factors contributing to violence, and neglects to include community resources to prevent IPV or support survivors. From an agenda-setting perspective, whether the media promotes IPV as a public

health issue requiring societal intervention has implications for public support of policies aimed at supporting victims of violence and funding to implement such supports. Conversely, public opinion and policies also affect media coverage. For example, social norms, value beliefs, and economic considerations can determine what is covered and how it is portrayed in the news (Taylor & Sorenson, 2002). Encouragingly, the narrative surrounding forms of IPV—both in the media and within the public sphere—is broadening to be more inclusive of sexual, economic, and psychological abuse (Carlyle, Guidry, & Burton, 2018). One likely contributor to this shifting narrative is the emergence of social media.

Nearly 70% of Americans use social media to share content and engage with others (Pew Research Center, 2018). Social media breaks down "gatekeeping" barriers found in more traditional mass media outlets, allowing the public to directly generate media content. Social networking platforms allow survivors to share their stories, advocate on the behalf of survivors, and spread awareness. Due to a confluence of social and political factors, viral hashtags related to IPV have proliferated in recent years, including #NotOkay, #WhyIStayed, #MeToo, and #WhyIDidntReport. These hashtags reflect a shift in public perceptions of IPV and, in many cases, were in response to problematic coverage of IPV in traditional media (e.g., news outlets questioning why the fiancée of an NFL player did not leave him after he abused her provided the impetus for #WhyIStayed). Moreover, such hashtags provide support for the notion that social media can be an effective medium for promoting a public health understanding of IPV.

Carlyle, Guidry, and Burton (2018) examined how IPV was portrayed on the social platform Pinterest. Based on their findings, the authors argue that Pinterest has the potential to be an effective pathway to disseminate bystander interventions, connect IPV victims with resources, and foster a supportive environment for victims. Though these results are promising, we know from other studies that how issues are portrayed on social media vary across platforms (Guidry et al., 2018) and that other violence-related topics were portrayed in problematic ways on Instagram (Carlyle, Guidry, Williams, Tabaac, & Perrin, 2018). For example, in their study of suicide on Instagram, Carlyle, Guidry, Williams, et al. (2018) found that most posts did not adhere to World Health Organization recommendations for preventing suicide contagion—for example, portraying self-harm far too often-and that the voices of public health professionals were largely absent from suicide conversations. Given these mixed findings, the current study replicates the Carlyle, Guidry, and Burton (2018) study using the platform Pinterest.

Instagram, which is a photo and video sharing social networking platform, reached 1 billion users in June 2018 (Instagram, 2018). Adults aged 18 to 29 years consume social media at the highest frequency and represent the largest group of Instagram users (Smith & Anderson, 2018). Due to the prevalence of IPV among young adults as well as their

Responsible for causing IPV	Text example	Responsible for preventing IPV	Text Example
Individual-Level Factors Personal history factors and characteristics such as age, race, gender, or history of abuse; also knowledge, attitudes and beliefs that support IPV; behaviors such as alcohol and drug use	It's not fair!!!!!  Iknow! dd horribe things to you: But why do you have to talk about its But why you suffer in silence?  Can't you suffer in silence?  You're so MEAN!	Individual-Level Factors Prevention strategies designed to promote attitudes, beliefs, and behaviors that ultimately prevent IPV, such as education and confidence-building; also includes strategies targeting victim andlor perpetrator behaviors, such as self-defense classes, advising women to leave abusive men, or counseling to reduce perpetrator aggression, etc.	"Yesterday at the bus ferminal at 6 a.m., there was a drunk man, and the minutes laten he fell into a deep sheep. He had oversized pants that left its underwear and half of this ass exposed.  In sum: young, drunk, late at might, in a sketchy place like the terminal and with his ass in the air and not I, nor any of the women who passed by this speciacle, raped him or killed him.  You see guys — it's not so hard, and that no matter how drunk one is or how one is or how one is of respect the lives of others???"
Interpersonal/Relationship-Level Factors How friends, peers, partners and family members influence a person's behavior and contributes to their range of experience. Specifically, close relationships that may increase the risk of experiencing IPV as a victim or perpetrator. Includes: friends/peers; family environment; relationship dynamics; social support/social isolation; social network factors.	30 Day Relationship Challenge: I.Ask "What can I help you with today? 2. Go a whole day without correcting him I3. Do not use sarcasm with him today. I4. Remember that being loved by him is a blessing.	Interpersonal/Relationship-Level Factors Prevention strategies focused on social relationships, such as: parenting or family-focused prevention programs, and mentoring and peer programs designed to reduce conflict, foster problem solving skills, and promote healthy relationships; bystander campaigns.	Following my interview with received an overwhelming number of messages all saying the same thing: I didn't know that happened to you. But domestic violence didn't just happen to me. Educate yourselves on dating violence, and how to be an advocate for those who are struggling because the sad truth is not all of us survive. #dome sticviolence#domesticviolenceawar eness#oneinfour #survivor
Organizational/Community-Level Factors Stem from institutions and social structures within the community, such as: lack of support from police, social services, judicial, or other institutions; weak sanctions against perpetrators of IPV; lack of domestic violence shelters; school or campus policies; influence of churches and other religious institutions, etc.	If male staff are in any way distracted by children's knees, I don't think they should be allowed anywhere near a school, to be honest.  Newstak @ @Venestast.PM School gins told to wear longer skirts to 'create a good work's environment for male staff bitly/fivikcs	Organizational/Community-Level Factors Prevention strategies designed to impact the climate, processes, and policies in a given system, such as strengthening campus violence prevention policies, implementing protocols for IPV screening at hospitals, increasing availability of domestic violence shelters and hotlines, social marketing campaigns, etc.	There is already a shortage of space for women and children as it is, but to not have shelters for men is insane. People assume men can protect themselves and that they don't need help, too. What about those men who are in relationships with other men? What about those men who are in relationships with women of power or who come from a lot of money? I've had men send me DMs saying they're literally in another state or COUNTRY because they genuinely fear for their lives. One gentleman told me his wife's family is very rich and they once had him jumped and nearly killed him. Another said his girffriend has attempted to get him fired from his job several times and that he looked like a "pussy" because a female was scaring him. MEN NEED PROTECTION TOO. It's crazy that we even need shelters to begin with to protect us from people who are supposed to love us. But this shouldn't be available to only women.
Societal/Policy-Level Factors Broad societal factors that help create a climate in which violence is encouraged or inhibited. Includes: social and cultural norms and religious beliefs that support violence as an acceptable way to resolve conflicts, as well policies that help to maintain gender inequal- ity; also, specific local, state, and federal laws and policies that influence IPV, such as the VAW, gun laws, etc.	The convenors of VGWN utterly condemn the death by Peter Dutton, it is creas and death by Peter Dutton, it is creas and death by Peter Dutton, it is creas and appending serial depointed and perpetuated in order to encourage fear and design of the perpetuated in order to encourage fear and existent by the perpetuated in order to encourage fear and existent by the perpetuated in order to encourage fear and existent by the perpetuated in order to encourage to the area of be designed to be apport this, in fact, crimes rates in general problem with its connectic volunteer. In 4447'S because the connectation or indense rate of to be lower to refer any order or indense rate of the perpetuated by years, of the perpetuated by years, or death will be the case with Lab Choi.  Reat in power. Demond batter of your press and government. We will be,	Societal/Policy-Level Factors Prevention strategies aimed at changing the broad, macrolevel factors that influence IPV, such as: petitioning lawmakers to improve VAW protections, creating programs to address long-term needs of IPV survivors, and promoting legislation to advance economic and educational opportunities for women and girls.	New Zealand just mandated paid leave for any worker who is subjected to domestic violence □□ A victim is eligible for 10 days, 'so they can take the necessary actions to separate from their partner, protect their family, move locations, or take legal action.

Figure 1. Social ecological model operational definitions.

Carlyle et al. 93S

**Table 1.** Intimate Partner Violence (IPV) Descriptive Statistics for Instagram Posts.

Variable	% (n)
IPV types	
Specific form of IPV	52.4 (367)
Physical abuse	53.4 (196)
Sexual abuse	35.1 (129)
Emotional/psychological abuse	49.9 (183)
Economic abuse	4.6 (17)
Stalking	6.0 (22)
Cyberstalking	0.5 (2)
Reproductive coercion	0.3 (1)
Social ecological model	
Responsible for causing IPV	59.0 (413)
Individual level	97.3 (402)
Interpersonal level	3.4 (14)
Organizational/community level	1.9 (8)
Societal/policy level	3.6 (15)
Attribute blame for IPV	
Victims	7.0 (29)
Perpetrators	94.2 (389)
Higher level factors (e.g., community, society)	4.6 (19)
Responsible for preventing IPV	66.1 (463)
Individual level	69.3 (321)
Interpersonal level	24.8 (115)
Organizational/community level	34.6 (160)
Societal/policy level	9.5 (44)
Attribute responsibility to prevent IPV	
Victims	43.0 (199)
Perpetrators	21.4 (99)
Higher level factors (e.g., community, society)	28.5 (132)
Victim blaming	
Describe/mention victim blaming	25.0 (175)
Describe/mention stopping victim blaming	12.3 (86)

high level of engagement with Instagram, examining the representation of IPV and the ways in which communication via this platform encourages or discourages public health approaches to IPV prevention is necessary and may inform future prevention campaigns. As such, this study investigates the following two research questions: (1) "What are the ways in which IPV messages on Instagram reflect public health understandings of, and approaches to prevention?" and (2) "How do Instagram users engage with these posts?"

## Method

This study analyzed IPV-related posts on the social media platform Instagram using a quantitative content analysis. In August 2018, 700 Instagram posts (all using the hashtags #IPV, #IntimatePartnerViolence, #domesticviolence, or #DV) were collected using Netlytic (www.netlytic.org). Netlytic is a cloud-based social media analytics tool specifically designed for researchers and allows users to automatically capture and

export social media posts. Netlytic downloads up until 1,000 Instagram posts per 15 minutes; for this sample, Instagram data were collected every 15 minutes August 1 to 18, 2018. The final sample of 700 posts was randomly selected from the Netlytic sample of 23,774 collected posts. These hashtags mirror keywords used in prior content analyses of media coverage of IPV (e.g., Carlyle et al., 2008) that focused on overarching public sentiment of IPV rather than analyses of specific viral hashtags such as #NotOkay or #WhyILeft. They also reflect the language used by the CDC (2018). Of note, we did initially look at #DV as well, but most of these posts were unrelated to domestic violence, and the few that were also used #domesticviolence. Posts were coded as a complete unit of visual and caption (i.e., the text accompanying the visual). Coding categories were not mutually exclusive (e.g., posts could contain attributions at multiple levels of the SEM). The codebook developed by Carlyle, Guidry, and Burton (2018) for Pinterest was adapted for Instagram in this study. The codebook contained codes for IPV type (physical, sexual, psychological, and economic abuse; stalking; cyber-stalking; and reproductive coercion), author characteristics, and engagement variables (likes and comments). To operationalize a public health approach to prevention, we used the SEM framework to classify how risk and protective factors for IPV (described in the introduction) were framed to make causal attributions about who was to blame for IPV happening and who was responsible for preventing it. We also incorporated recommendations from the CDC's technical package for preventing IPV across the life span, such as teaching healthy relationship skills, engaging bystanders and families, improving organizational climates and policies, creating protective physical and social environments, and increasing treatment and support services for survivors (Niolon et al., 2007). Figure 1 summarizes the operational definitions for these coding categories. We also coded whether, overall, the post attributed responsibility for causing and preventing violence primarily to perpetrators, victims, or higher order factors such as organizations, communities, or policies. To provide better context for victim-blaming posts, we also coded whether posts were engaging in victim blaming or challenging victim blaming.

Two coders were trained on the coding protocol to establish intercoder reliability. Both coders coded 10% of the posts (n=70). After pretesting and subsequent changes to the coding protocol, the intercoder reliability test with the ReCal statistical program showed that Scott's pi (Scott, 1955) was on average .73. The individual coefficients were all considered to be reliable, with the lowest coefficient at .70. After achieving reliability, the first coder coded another 250 posts and the second coder another 400 posts for all study variables.

#### Results

Of the total sample, 41.3% (n = 289) posts were published by individuals' accounts, 11.1% (n = 78) by individuals as

sole proprietors (e.g., professional bloggers, online consultants, etc.), 22.7% (n=159) by nonprofit/public health entities, 13.1% (n=92) by online activists (accounts that are not an official nonprofit but advocate for IPV victims and IPV-related education), 3.4% (n=24) by commercial entities, while 8.4% (n=58) were posted by other types of Instagram accounts.

Kruskal–Wallis tests showed that there was a significant difference in median comment frequency by poster identity,  $\chi^2(5) = 21.751$ , p = .001. Posts by nonprofit/public health entities elicited significantly fewer comments than posts by individuals (p = .001), online activists (p = .031), and commercial entities (p = .021). There was no difference in the median like frequency by poster identity. The median for the number of likes was 23.00, and the median for the number of comments was 1.00, while the range for likes was 1,910 and for comments 117.

This study's research questions were (1) "What are the ways in which IPV messages on Instagram reflect public health understandings of, and approaches to, prevention?" and (2) "How Instagram users engage with these posts?" To assess whether the posts reflected the breadth of the public health definition of IPV, we coded the specific types of IPV present. In this sample, 52.4% of all posts mentioned a specific type of IPV. Of those posts, physical abuse (53.4%), sexual abuse (35.1%), and psychological/verbal abuse (49.9%) were the most common types of IPV mentioned (see Table 1 for a complete list). Mann–Whitney U tests were run to determine if there were differences in engagement frequencies between post types. Posts that mentioned a specific form of IPV elicited significantly higher median levels of comments (Z = 2.94, p = .003) than posts that did not mention a specific form of IPV. Significantly higher  $(Z_{ij} = 2.22,$ p = .034) like frequencies were present in posts that mentioned emotional/psychological abuse versus posts that did not. However, significantly fewer likes ( $Z_{ij} = -3.27$ , p =.001) and comments ( $Z_{\mu} = -2.15, p = .032$ ) were present in posts mentioning stalking compared with posts that did not.

Fifty-nine percent of all posts made some attribution about who was to blame for IPV happening. Looking at the distribution of those posts across levels of the SEM, 97.3% referred to individual-, 3.4% to interpersonal-, 1.9% to community-, and 3.6% to societal-level factors. Using Man—Whitney U tests, we found that there were no significant differences in like and comment frequencies between posts that mentioned attribution of causal responsibility for IPV on any level and posts that did not. Overall, blame for IPV was attributed to perpetrators in the majority (94.2%) of posts (see Table 1 for full results).

Responsibility for preventing IPV was present in 66.1% of all posts. Of those, 69.3% referred to individual-, 24.8% to interpersonal-, 34.6% to community-, and 9.5% to societal-level factors (see Table 1). Mann–Whitney U tests showed that posts that mentioned individual responsibility for IPV prevention elicited higher median like  $(Z_u = 2.09, p = .037)$ 

and comment ( $Z_u = 2.37$ , p = .018) frequencies, and that posts that mention interpersonal responsibility for IPV prevention produce significantly more comments than those that do not ( $Z_u = 2.00$ , p = .045). Finally, the mention of community responsibility for IPV prevention was associated with lower median like ( $Z_u = -2.62$ , p = .009) and comment ( $Z_u = -2.60$ , p = .009) frequencies compared with posts that did not allude to this dynamic. Overall, responsibility for preventing IPV was placed primarily on victims (43.0%). Related, victim blaming was mentioned in 25.0% of posts, whereas stopping victim blaming was present in 12.3% of posts.

## Discussion

This study investigated the ways in which IPV messages on Instagram reflect public health understandings of, and approaches to, prevention as well as how users engage with these posts. Consistent with traditional media coverage (Carlyle et al., 2008), the most common form of IPV depicted on Instagram was physical abuse. In contrast to traditional media coverage, however, almost half of the posts on Instagram portraying a specific type of abuse included emotional/psychological abuse, and 35% portrayed sexual abuse. Although portrayals of economic abuse, stalking, and reproductive coercion remain quite low, it is encouraging to see overall broader recognition of the varying forms of IPV.

One quarter of the posts described victim blaming, whereas 12% referenced ending victim blaming—another indication that public conversations about IPV are falling more in line with public health approaches that challenge norms conducive to violence. Although the clear majority of posts (94%) attributed blame for IPV to perpetrators, only 21% attributed responsibility for preventing IPV to perpetrators. Unfortunately, 43% of posts attributed responsibility for stopping IPV to victims, with the common theme of directing to the victim to leave the abusive relationship. Relatedly, the hashtag #WhyIStayed went viral on Twitter in 2014 and provided myriad reasons why victims do not leave abusive relationships. Encouraging victims to leave abusive relationships absent a safety plan may be irresponsible, as victims are more likely to be killed while they are in the process of leaving their abuser (National Coalition Against Domestic Violence, n.d.-a, n.d.-b). It is also frequently the case that victims' fear of harm toward their child(ren) and insufficient resources to safely relocate are barriers to leaving (World Health Organization, 2012). The ability to leave an abusive relationship is often dependent on the availability of direct services or public health initiatives such as crisis centers that provide safety planning, financial and legal assistance, employment navigation, and temporary shelter.

Another discouraging finding was that the conversations involving who was responsible for preventing IPV focused largely on the role of the victim. Abusers also often use social isolation as a control tactic, which effectively reduces the

Carlyle et al. 95S

victim's ability to tap into social support and resources when they need them most. This perspective also fails to acknowledge the immense and intricate role that emotional abuse plays in IPV, as well as the severe and long-lasting effects such abuse can have on victims. Feelings such as diminished self-worth, depression, fear, and anxiety can decimate victims' self-concept such that they are unable to leave or seek help (Teaster, 2004). This erroneous positioning of victims as the solution to their own victimization provides further support for the necessary involvement of public health and violence education professionals in social media violence education and support campaigns.

## Strengths and Limitations

A key strength of the current study is the use of the CDC's (2018) framework for violence prevention grounded in the SEM to guide the development of the codebook. This approach gives greater utility to the findings as "infodemiological" data that can inform future public health interventions on this platform. Although the goal of the study was to examine IPV in general on Instagram, there are some limitations to our use of only #IPV/IntimatePartnerViolence and #DV/Domesticviolence as search terms. Other general terms such as #abuse may also be used to describe IPV and be missed in our sample. We chose against including other broad terms because we wanted to understand how people were talking about situations that they *identified* as IPV or DV, specifically, versus other forms of abuse. Similarly, very specific IPV-related terms such as #WhyIStayed may have been missed in our sample. We did not include these hashtags because they arise largely in response to a specific media event, draw a more specific audience, and are more representative of social movements than everyday public sentiment. Related, the accuracy of our findings is vulnerable to history threats that may have occurred during the data collection period given the prominence of IPV in the media in our current sociopolitical climate. Future research should compare across content analyses of both general and specific IPV hashtags on social media over the past 5 years to identify successful strategies for shifting social norms and public conversations about IPV. As a practical implication, we recommend that public health organizations use both traditional terminology and viral phrases in their hashtags to maximize the reach of their social media messaging.

A final limitation worth noting is the ambiguity in interpreting engagement results. For example, our data tell us whether a post was commented on, not the valence of each comment. Similarly, people may have different motivations for "liking" a post. Thus, our data give us an indication of what content is eliciting engagement, but not what that engagement *means*. Such analyses may be better suited for qualitative approaches, and future research should consider mixed method approaches to understanding social media content and engagement.

#### Conclusion

The increased engagement of social media users in discussing IPV on Instagram provides public health entities with a unique opportunity to utilize their resources to enhance IPV prevention efforts. Moreover, evidence suggests that photos with short comments are effective ways for public health organizations to communicate health issues via social media (Strekalova & Krieger, 2017), making Instagram an ideal platform for prevention messaging. The advent of social media, more generally, represents an important turning point, both in culture and technology, where survivors of IPV may be able to tap into online communities to find people who support and believe them, as well as information that can help them. However, the present study found a decreased rate of engagement with posts that discussed community responsibility for IPV prevention. This finding could indicate that an important next step in social media conversation about violence is to highlight the importance of the community level in the lives of IPV victims and perpetrators, as well as the specific role(s) of communities in ending IPV. Public health organizations are wellsuited to provide clear guidance on actionable steps that communities can take in order to prevent violence. However, to realize this potential, how to use social media effectively to engage with audiences and not just as a unidirectional information dissemination tool must be a core component of health educator training.

#### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

#### **Funding**

The authors received no financial support for the research, authorship, and/or publication of this article.

#### **ORCID iDs**

Jeanine P. D. Guidry https://orcid.org/0000-0002-6903-7464 Candace W. Burton https://orcid.org/0000-0002-0557-6020

#### **Supplement Note**

This article is part of the *Health Education & Behavior* supplement issue, "Advancing the Science and Translation of Digital Health Information and Communication Technology." The printing and dissemination of the supplement was supported by the Office of Behavioral and Social Sciences Research, National Institutes of Health (Contract No. HHSN276201800167P). No federal funds were used in the development of these supplement manuscripts, and the views and findings expressed in them are those of the authors and are not meant to imply endorsement or reflect the views and policies of the U.S. Government. The entire supplement is available open access at https://journals.sagepub.com/toc/hebc/46/2 suppl.

#### References

Breiding, M., Basile, K. C., Smith, S. G., Black, M. C., & Mahendra, R. (2015). *Intimate partner violence surveillance:* 

- Uniform definitions and recommended data elements. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from https://www.cdc.gov/violenceprevention/pdf/intimate-partnerviolence.pdf
- Capaldi, D. M., Knoble, N. B., Shortt, J. W., & Kim, H. K. (2012).
  A systematic review of risk factors for intimate partner violence. *Partner Abuse*, 3, 231-280.
- Carlyle, K. E. (2017). The role of social media in promoting understanding of violence as a public health issue. *Journal of Communication in Healthcare*, 10, 162-164. doi:10.1080/1753 8068.2017.1373907
- Carlyle, K. E., Guidry, J. P. D., & Burton, C. W. (2018). Recipes for prevention: An analysis of intimate partner violence messages on Pinterest. *Journal of Interpersonal Violence*. Advance online publication. doi:10.1177/0886260518812073
- Carlyle, K. E., Guidry, J. P. D., Williams, K., Tabaac, A., & Perrin, P. B. (2018). Suicide conversations on Instagram: Contagion or caring? *Journal of Communication in Healthcare: Strategies, Media and Engagement in Global Health*, 11, 12-18.
- Carlyle, K. E., Orr, C., Savage, M. W., & Babin, E. A. (2014). News coverage of intimate partner violence: Impact on prosocial responses. *Media Psychology*, 17, 451-471.
- Carlyle, K. E., Slater, M. D., & Chakroff, J. L. (2008). Newspaper coverage of intimate partner violence: Skewing representations of risk. *Journal of Communication*, 58, 168-186.
- Centers for Disease Control and Prevention. (2017a). *Intimate partner violence: Risk and protective factors*. Retrieved from https://www.cdc.gov/violenceprevention/intimatepartnerviolence/riskprotectivefactors.html
- Centers for Disease Control and Prevention. (2017b). *The national intimate partner and sexual violence survey (NISVS): 2010-2012 State Report*. Retrieved from https://www.cdc.gov/violenceprevention/nisvs/infographic.html
- Centers for Disease Control and Prevention. (2018). *The social-ecological model: A framework for prevention*. Retrieved from https://www.cdc.gov/violenceprevention/overview/social-ecologicalmodel.html
- Cole-Lewis, H., Pugatch, J., Sanders, A., Varghese, A., Posada, S., Yun, C., . . . Augustson, E. (2015). Social listening: A content analysis of e-cigarette discussions on Twitter. *Journal of Medical Internet Research*, 17(10), e243.
- Google Play Store. (2018). *Instagram*. Retrieved from https://play.google.com/store/apps/details?id=com.instagram.android&hl=en\_US
- Guidry, J. P. D., Austin, L., Carlyle, K., Freberg, K., Meganck, S. L., Orr, C. A., . . . Messner, M. (2018). Welcome or not: Comparing #Refugee posts on Instagram and Pinterest. *American Behavioral Scientist*, 62, 512-531.
- Instagram. (2018). Welcome to IGTV. Retrieved from https://instagram-press.com/blog/2018/06/20/welcome-to-igtv/
- McLean, G., & Bocinski, S. G. (2017). The economic cost of intimate partner violence, sexual assault, and stalking. Institute for Women's

- Policy Research. Retrieved from https://iwpr.org/publications/economic-cost-intimate-partner-violence-sexual-assault-stalking/
- National Coalition Against Domestic Violence. (n.d-a). *National statistics*. Retrieved from https://ncadv.org/statistics
- National Coalition Against Domestic Violence. (n.d-b). Why do victims stay? Retrieved from https://ncadv.org/why-do-victims-stay
- Niolon, P. H., Kearns, M., Dills, J., Rambo, K., Irving, S., Armstead, T., & Gilbert, L. (2017). Preventing intimate partner violence across the lifespan: A technical package of programs, policies, and practices. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Palazzolo, K. E., & Roberto, A. J. (2011). Media representations of intimate partner violence and punishment preferences: Exploring the role of attributions and emotions. *Journal of Applied Communication Research*, 39, 1-18.
- Pew Research Center. (2018). Social media fact sheet. Retrieved from http://www.pewinternet.org/fact-sheet/social-media/
- Savage, M. W., Scarduzio, J. A., Harris, K., Carlyle, K., & Sheff, S. (2017). News stories of intimate partner violence: An experimental examination of participant sex, perpetrator sex, and violence severity on seriousness, sympathy, and punishment preferences. *Health Communication*, 32, 768-776.
- Scott, W. (1955). Reliability of content analysis: The case of nominal scale coding. *Public Opinion Quarterly*, 19, 321-325.
- Smith, A., & Anderson, M. (2018). Social media use in 2018. Washington, DC: Pew Research Center. Retrieved from https://www.pewinternet.org/2018/03/01/social-media-use-in-2018/
- Strekalova, Y. A., & Krieger, J. L. (2017). A picture really is worth a thousand words: Public engagement with the National Cancer Institute on social media. *Journal of Cancer Education*, 32, 155-157.
- Taylor, C. A., & Sorenson, S. B. (2002). The nature of newspaper coverage of homicide. *Injury Prevention*, 8, 121-127.
- Teaster, F. J. (2004). Positive self-talk statements as a self-esteem building technique among female survivors of abuse. Retrieved from https://dc.etsu.edu/cgi/viewcontent.cgi?article=2132&context=etd
- Truman, J., & Morgan, R. E. (2014). Special report: Nonfatal domestic violence, 2003-2012 (Publication No. NCJ24469). Washington, DC: Bureau of Justice Statistics, U. S. Department of Justice. Retrieved from https://www.bjs.gov/content/pub/pdf/ndv0312.pdf
- World Health Organization. (2012). *Understanding and addressing violence against women: Intimate partner violence*. Retrieved from http://apps.who.int/iris/bitstream/handle/10665/77432/WHO\_RHR\_12.36\_eng.pdf?sequence=1
- World Health Organization. (2013). Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. Retrieved from https://www.who.int/reproductivehealth/publications/violence/9789241564625/en/
- World Health Organization. (2018). Violence against women.

  Retrieved from http://www.who.int/news-room/fact-sheets/
  detail/violence-against-women