"We are all in this together:" police use of social media during the COVID-19 pandemic

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Abstract

Purpose – Previous studies consistently indicate that police agencies tend to use social media to assist in criminal investigations, to improve police-community relations and to broadcast both crime- and non-crime-related tips promotive of public safety. To date, little research has examined what content the police tended to post on their social media sites during the COVID-19 pandemic.

Design/methodology/approach – By selecting the 14 most widely attended police agencies' Facebook accounts, the current study collects and analyzes a sample of 2,477 police Facebook postings between February 1 and May 31, 2020. By using a mix-method approach, the study addresses three research questions: 1) What kinds of messages did the police tend to post on their Facebook pages before and during this pandemic? 2) What types of COVID-related police Facebook postings were made? 3) How did the public react to COVID-19-related police Facebook postings?

Findings – The findings suggest that the police have come to believe that social media can be used as an effective police–public communicative tool in stressful times. The findings also suggest that social media platforms have become a routinized tool of police–public communications which can, to some appreciable extent, substitute for the in-person contacts traditionally relied upon in community policing.

Originality/value – This study of police use of social media explores the question of whether the use of these media can serve as an effective tool to connect the police with the public under circumstances where in-person contacts are greatly constrained. Some public policy implications emerging from the findings reported are discussed, along with implications for further research along these lines.

Keywords COVID-19, Police, Social media, Facebook, Mixed-methods, E-COP

Paper type Research paper

Introduction

The COVID-19 pandemic altered countless lives across the world. As of May 17, 2021, the US had the most COVID-19 cases and deaths of any nation, with over 32,750,000 confirmed cases and nearly 590,000 deaths (CDC, 2021). As biological scientists worked to create vaccines and therapeutics, social scientists have sought to document how the pandemic has affected society. Criminal justice researchers have investigated impacts on crime rates (e.g. Beard *et al.*, 2021; Boman and Gallupe, 2020), domestic violence (e.g. Piquero *et al.*, 2020), hate crimes (e.g. Tessler *et al.*, 2020) and cybercrime (e.g. Hawdon *et al.*, 2020). Likewise, impacts on courts (e.g. Baldwin *et al.*, 2020) and jails/prisons have been estimated (e.g. Marcum, 2020). Policing researchers have explored how the pandemic has changed policing practices and priorities. For instance, between late March and early May more than 90% of the US population received stay-at-home orders (White and Fradella, 2020). Enforcing such orders proved extremely difficult (Jennings and Perez, 2020; White and Fradella, 2020; Stogner *et al.*, 2020).

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Some scholars have voiced concern for sustaining law enforcement legitimacy during the pandemic (e.g. Jones, 2020; White and Fradella, 2020). In many US communities enforcing stay-at-home orders enhanced the divide between the police and the public they serve (Jones, 2020). Of course, one way to sustain police legitimacy is through timely, ongoing effective police–public interactions. Before the pandemic, community-oriented policing outreach activities were used as an effective tool for positive police/citizen interactions (e.g. Hawdon *et al.*, 2003; Peyton *et al.*, 2019). However, traditional forms of community-oriented policing outreach were curtailed as public health authorities called for minimizing face-to-face interactions. At this point, studies on police use of social media may shed light on maintaining a connection between the police and the public when in-person contacts are limited (Carrier *et al.*, 2021; Cartwright and Shaw, 2020; Hu and Lovrich, 2020; Hu, 2016). To date, little research has systematically examined police use of social media during the pandemic, creating a gap in research that our study attempts to fill with pertinent empirical data.

Literature review

Communicating with citizens in a pandemic

Early work on the impacts of COVID-19 on policing generally highlighted resource issues, workforce safety concerns, the difficulty of enforcing stay-at-home orders and changes to some service provision patterns (Jennings and Perez, 2020). Effective internal communications proved to be essential for disseminating timely information to police personnel and their families about health safety concerns where confusion often reigned as the developing scientific understanding of the virus occasioned changes in public health guidelines. Likewise, effective public communication proved essential for providing accurate and timely information to citizens in collaboration with public health agencies. The police were often relied upon to reduce public confusion and promote voluntary compliance with public health dicta such as social distancing (Jennings and Perez, 2020).

Some scholars have drawn upon prior research on natural disasters to find potential insights into policing during a pandemic emergency. For example, Laufs and Waseem (2020) opined that maintaining ongoing communication with citizens during a crisis could be challenging because the police are interacting intensely with those who are most seriously impacted by the disaster at hand. They point to numerous studies on police and fire agencies' effective use of social media during hurricanes (Chauhan and Hughes, 2015) and floods (Bruns *et al.*, 2012) to illustrate how social media can serve as an effective tool for maintaining ongoing crisis-time communications with citizens. Laufs and Waseem (2020) pointed out that while the flexibility of social media content updating was an effective short-term tool, it would be wise for the police to also have established channels of communication to maintain ongoing police-public online linkage (also see Bruns *et al.*, 2012).

More directly pertinent to public health phenomena, a study on the *Twitter* accounts of several municipal agencies in three US metropolitan areas showed that social media can help local government agencies disseminate timely public health information to a large audience quickly and at a modest cost (Zeemering, 2021). Based on both the natural disasters experiences and this study of public health promotion via social media, it is indeed apparent that current social media platforms can serve as valuable police communication assets in a pandemic.

Police use of social media

While the police have been using social media for various purposes for over a decade, the number of studies on police use of social media has been increasing rather slowly (Hu and Lovrich, 2020, 2021). Some researchers explore what police decide to post on social media (e.g.

Dai *et al.*, 2017; Hu *et al.*, 2018; Lieberman *et al.*, 2013; Wood, 2020). For example, Lieberman *et al.* (2013) conducted a content analysis of 1,347 *Facebook* messages posted by 23 US police agencies; they identified 12 major categories and 27 subcategories of postings. Hu *et al.* (2018) analyzed 7,153 *Facebook* posts across 14 police agencies and identified five major themes and 24 subthemes, including crimes and criminals, tips, police-public relations, personnel, and social networking sites. Some of the studies on police social media content investigate a particular type of social media posting. For instance, Carrier *et al.* (2021) analyzed police recruitment videos posted on official websites and social media pages; Hand and Ching (2020) analyzed over 350,000 police *Facebook* posts and comments regarding a fatal officer-involved shooting.

Some studies have investigated the public's reaction to police social media posts (e.g. Cartwright and Shaw, 2020; Hu *et al.*, 2020; Jeanis *et al.*, 2019). For example, Hu *et al.* (2020) conducted a study on public preferences toward police *Facebook* posts. They found that the public tended to like and make comments on postings of police–public relations and police personnel, and they tended to favor *Facebook* posts featuring pictures (Hu *et al.*, 2020). Jeanis *et al.* (2019) analyzed user engagement with *Facebook* postings by a police agency in Louisiana; they reported that public engagement was significantly affected by both the content of the posts and the time of their postings. Another study in the UK documented public support for police use of social media (Cartwright and Shaw, 2020). Most respondents in their study actively followed their local police agencies' social media.

A few studies have involved interviews with the police personnel who maintain social media websites (e.g. Mayes, 2021; O'Connor and Zaidi, 2020; Uduma, 2020). For example, a study on 45 Nigerian police officers engaged in social media messaging concluded that the police used social media for intelligence gathering and surveillance, public relations and for community engagement (Uduma, 2020). Relatedly, a recent US study, based on semi-structured interviews with 11 sworn officers and police civilian employees responsible for posting content on departmental social media websites in a mixed set of 11 large and small police agencies (Mayes, 2021), reported findings consistent with prior content analysis-based studies indicating that these managers emphasize the goals of *transparency* and *humanizing police officers* on social media. A similar finding can be found in O'Connor and Zaidi's (2020) study based on interviews with 29 police personnel overseeing police agencies' social media sites.

These several studies on police use of social media lead to two observations. First, the public is generally supportive of police use of social media (e.g. Cartwright and Shaw, 2020; Hu *et al.*, 2020; Hu, 2016; Jeanis *et al.*, 2019). Second, while police agencies can certainly use social media as a crime-fighting tool, "the emergence of social media provides police agencies with an excellent opportunity to bypass the traditional media and communicate with the public directly, and likewise provides for greater potential for police/citizen interaction" (Hu and Lovrich, 2021, p. 3; also see Walsh and O' Connor, 2019). Accordingly, Hu and Lovrich (2020) developed the "electronic community-oriented policing (E-COP)" concept to explore how social media can be used to maintain a positive relationship between the police and the public. The concept was originally introduced by Cordner and Perkins in 2013. Hu and Lovrich (2020) expanded upon the concept by using empirical data gleaned from mix-methods studies. The fundamental argument was that the police could conduct community-oriented policing online with modest cost and high efficiency (Hu and Lovrich, 2020). Based on this argument, together with the reduced physical contacts between the police and the public stemming from COVID public health restrictions, it is reasonable to believe that adroit police use social media to stay in touch with the public during the pandemic could produce much public benefit. However, to date, there has been little research on police use of social media in this pandemic. The current study attempts to fill this gap.

The current study

Using a unique police *Facebook* posts dataset, our study addresses three research questions: 1) What types of content did the police tend to post on their *Facebook* pages before and during this pandemic? 2) What did COVID-related police *Facebook* posts tend to feature as their content? 3) How did the public react to the COVID-19-related police *Facebook* postings? The study explores data collected shortly before and at the beginning of the pandemic (February 1, 2020–May 31, 2020). As such, the analysis here provides a focused picture of police use of social media to address the COVID-19 pandemic.

Methods

Data

A previous study gathered data from the 14 most attended to US police agencies (measured by the number of "likes" on *Facebook*) going back to 2014. Those data were used to conduct a detailed content analysis on 7,153 *Facebook* postings (Hu *et al.*, 2018). The prior study categorized police *Facebook* posts into five groups based on a set of major themes (i.e. crimes and criminals, tips, police-public relations, police personnel and social networking sites). It found that four different types of police *Facebook* social images are being projected by police websites, those being the crime fighter, the traditional cop, the public relations facilitator and the mixer. Our study revisited these police agencies' *Facebook* pages on September 12, 2020 and collected their posts over a period of four months. Their pre- and during the COVID-19 pandemic posts are compared.

Three considerations led to the decision to collect these data. First, since these police *Facebook* pages were highly attended to in 2014, it is reasonable to assume that they would continue using *Facebook* in ensuing years. Second, some diversity obtains among these 14 police agencies; some are very large such as the NYPD, while some are small such as the Rosenberg (TX) PD, and some are medium-sized such as the Stockton (CA) PD. Third, by selecting these 14 police agencies the current study can compare the agencies' current social media images to their previous images to document any changes during pandemic circumstances. The sample features 2,477 separate police *Facebook* postings.

Analytical strategies and variables

First, a qualitative content analysis was done using Hu *et al.*'s (2018) coding scheme on all 2,477 posts (see Appendix). The coding process revealed that even though six years had elapsed since that coding scheme was developed, that same coding process permitted the classification of nearly all 2,477 more recent *Facebook* posts into one of the five major themes. Besides the five major themes, a sixth classification was created to code *Facebook* posts that were *directly* related to COVID-19; this classification was labeled "COVID." In addition, a seventh variable labeled "COVID-related" was created for postings wherein the primary purpose of a *Facebook* post fell into one of the five major themes (i.e. crimes and criminals, tips, police-public relations, police personnel, and social networking sites), but the posting also had a COVID-related component. The coding process took two rounds. After the first round of coding, all postings were shuffled and recoded to assess coder reliability. Over 99% of the postings received the same coding.

In addition, several behavior-based variables were created to permit quantitative analyses. In alignment with Hu *et al.*'s (2020) study on public preferences toward police *Facebook* posts, the number of *reactions*, the number of *shares* and the number of *comments* were collected for each police *Facebook* post to reflect how the public reacted to postings. Two points are worthy of note in this regard. First, the current study used the number of *reactions* instead of the number of likes. The "reaction" button was introduced by *Facebook* in 2016.

Expanding the functions of the "like" button, as of May 2021, *Facebook* users can long-press on the "like" button to select one of seven emotions (like, love, care, haha, wow, sad and angry). Second, prior research indicated that the public was more prone to favor postings featuring pictures than pictureless postings but was less likely to favor postings with imbedded hyperlinks (Hu *et al.*, 2020). Consequently, three dichotomous variables were used to capture the presence of pictures, videos or hyperlinks. Chi-square tests, *t*-tests and descriptive statistics were used to carry out quantitative analyses on reactions, comments, and shares.

Findings

Descriptive statistics on Police Facebook pages and posting patterns

Combining data from Hu *et al.*'s (2018) research and data collected by the current study, Table 1 displays the basic descriptive statistics for the 14 police agencies' *Facebook* pages. Regardless of the size of the agency, all 14 agencies received a significant increase in *Facebook* "likes." For example, the number of "likes" for the NYPD's *Facebook* page nearly doubled (1.93 times) vis-a-vis October of 2014. The number of "likes" for the Las Vegas Metropolitan PD increased nearly five-fold (4.61 times) in the same time period. The much smaller Rosenberg (TX) PD and the Stockton (CA) PD experienced slight decreases (0.90 times and 0.88 times, respectively). The number of follows and likes were strongly correlated ($r = 0.998$, $p < 0.001$).

Table 2 shows the primary content of 14 police agencies' *Facebook* pages between February 1 and May 31, 2020. Three major findings can be reported here. First, in general, police agencies tended to post content related to police-public relations (36.9%) and crimes and criminals (36.6%), followed by notifications on agency personnel (11.0%) and tips (10.1%). Moreover, social-networking-site posts were quite uncommon. These findings were consistent with previous results reported in the research literature (e.g. Dai *et al.*, 2017; Hu *et al.*, 2018; Hu *et al.*, 2020; Lieberman *et al.*, 2013). Second, there was much variation among police agencies' *Facebook* posting rates. Some were highly active such as the Boston PD (2.56 posts/day), the Chicago PD (2.26 posts/day), and the Dallas PD (2.40 posts/day). In contrast, others were far less active such as the Las Vegas Metro PD (0.47 posts/day), the San Antonio PD (0.56 posts/day), and the Houston PD (0.79 posts/day).

Third, the current study documented the fact that some agencies altered their social media images during the early stages of the pandemic. The social media image is a concept

Agency name	Agency size (sworn officers)	Facebook "likes" as 10/01/2014	Facebook "likes" as 09/12/2020	Facebook "follows" as 09/12/2020
New York City Police Department	1,000+	287,751	843,628	875,968
Boston Police Department	1,000+	114,760	232,288	234,226
Philadelphia Police Department	1,000+	81,169	195,873	208,026
Polk County Sheriff's Office	500–999	74,495	252,515	292,833
San Antonio Police Department	1,000+	70,498	236,276	251,951
Rosenberg Police Department	50–99	70,138	133,565	131,699
Stockton Police Department	250–499	67,984	127,672	131,642
Houston Police Department	1,000+	62,289	179,506	203,963
Chicago Police Department	1,000+	57,593	293,671	333,425
Dallas Police Department	1,000+	54,265	226,390	236,260
Jacksonville Sheriff's Office	1,000+	48,831	215,065	224,028
Anne Arundel County Police Department	500–999	40,529	108,699	111,243
Las Vegas Metropolitan Police Department	1,000+	40,271	225,730	243,297
Arlington Police Department	500–999	38,487	119,447	122,534

Table 1. Descriptive statistics of police Facebook pages

Table 2.
Primary content of 14 police agencies' Facebook pages from February 1, 2020 to May 31, 2020

Police department	Crimes and criminals (%)	Tips (%)	Police-public relations (%)	Primary content Personnel (%)	Social networking sites (%)	COVID (%)	COVID-related	Total (%)
New York City Police Department, NY	21 (16.2)	8 (6.2)	71 (54.6)	13 (10.0)	5 (3.8)	12 (9.2)	40 (30.8)	130 (100.0)
Boston Police Department, MA	189 (61.6)	20 (6.5)	49 (16.0)	36 (11.7)	0 (0.0)	13 (4.2)	29 (9.4)	307 (100.0)
Philadelphia Police Department, PA	125 (88.7)	1 (0.7)	7 (5.0)	7 (5.0)	0 (0.0)	1 (0.7)	1 (0.7)	141 (100.0)
Polk County Sheriff's Office, FL	99 (58.2)	9 (5.3)	46 (27.1)	9 (5.3)	5 (2.9)	2 (1.2)	6 (3.5)	170 (100.0)
San Antonio Police Department, TX	14 (21.5)	8 (12.3)	21 (32.3)	15 (23.1)	0 (0.0)	7 (10.8)	11 (16.9)	65 (100.0)
Rosenberg Police Department, TX	28 (23.3)	20 (16.7)	57 (47.5)	11 (9.2)	0 (0.0)	4 (3.3)	27 (22.5)	120 (100.0)
Stockton Police Department, CA	157 (71.0)	11 (5.0)	37 (16.7)	12 (5.4)	0 (0.0)	4 (1.8)	12 (5.4)	221 (100.0)
Houston Police Department, TX	9 (9.5)	10 (10.5)	44 (46.3)	23 (24.2)	2 (2.1)	7 (7.4)	20 (21.1)	95 (100.0)
Chicago Police Department, IL	41 (15.1)	14 (5.2)	181 (66.8)	28 (10.3)	3 (1.1)	4 (1.5)	57 (21.0)	271 (100.0)
Dallas Police Department, TX	53 (18.4)	48 (16.7)	128 (44.4)	28 (9.7)	12 (4.2)	19 (6.6)	37 (12.8)	288 (100.0)
Jacksonville Sheriff's Office, FL	73 (38.0)	35 (18.2)	56 (29.2)	23 (12.0)	0 (0.0)	5 (2.6)	13 (6.8)	192 (100.0)
Anne Arundel County Police Department, MD	46 (18.1)	44 (17.3)	97 (38.2)	39 (15.4)	4 (1.6)	24 (9.4)	57 (22.4)	254 (100.0)
Las Vegas Metropolitan Police Department, NV	10 (17.9)	6 (10.7)	19 (33.9)	13 (23.2)	0 (0.0)	8 (14.3)	18 (32.1)	56 (100.0)
Arlington Police Department, TX	41 (24.6)	7 (4.2)	100 (59.9)	16 (9.6)	0 (0.0)	3 (1.8)	7 (4.2)	167 (100.0)
Total	906 (36.6)	250 (10.1)	913 (36.9)	272 (11.0)	31 (1.3)	105 (4.2)	334 (13.5)	2,477 (100.0)

developed by Hu *et al.*'s (2018) in prior research. Based on the primary content of police *Facebook* posts, Hu *et al.* (2018) categorized police *Facebook* pages into four distinctive groups: *crime fighter* (i.e. the majority of posts were about crimes and criminals), *traditional cop* (i.e. lots of posts were about crimes and criminals, with a certain number of posts related to public-relations), *public-relations facilitator* (i.e. the majority of posts were about public-relations), and *mixer* (i.e. there was no significant posting preference regarding content). The current study found that during the pandemic some agencies modified their social media images while others remained unaltered. Figure 1 displays the comparisons for all 14 police agencies.

Based on Figure 1, 11 of 14 police agencies stayed with their established social media images. For example, the NYPD's *Facebook* page was categorized as a public-relations facilitator in Hu *et al.*'s (2018) study, with 48.9% of posts being related to public relations. In our study the NYPD remained categorized as a public-relations facilitator with 60.2% of its posts being about police-public relations. To be noted, while many public-relations facilitators continued having the majority of *Facebook* posts on police-public relations, the percentages of posts of other types of content had changed. For example, in the case of the NYPD percentages for postings made on crimes/criminals increased from 13.4 to 17.8, while the percentages for postings on personnel had decreased from 33.2 to 11.0. Similarly, the Rosenberg PD increased the amount of content on crimes/criminals from 6.0% to 24.1% while decreasing the percentage for personnel from 16.8% to 9.5%.

Three police agencies changed their social media images rather dramatically. The Dallas PD changed from a mixer classification in 2014 (i.e. 28.2% crimes and criminals, 28.8% police-public relations, and 30.8% personnel) to a typical public-relations facilitator in 2020 (i.e. 47.4% police-public relations, 19.6% crimes and criminals). Anne Arundel County PD changed from a traditional cop (51.4% crimes and criminals, 18.8% police-public relations) to a public-relations facilitator (40.9% police-public relations, 19.4% crimes and criminals). Finally, the Boston PD changed from a public-relations facilitator to a traditional cop. The number of posts of police-public relations had decreased significantly from 58.5% to 16.7, and the number of posts of crimes and criminals had significantly increased from 25.6% to 64.3%.

Regarding COVID-related *Facebook* posts, among the 2,477 postings only 105 (4.2%) were directly about COVID and another 230 (9.3%) had COVID-related content. Figure 2 shows the time and the amount of posting of COVID-19-related content done by these 14 agencies. To illustrate any possible patterns between the number of COVID posts and COVID cases in the US, the COVID-19 cases data from the Centers for Disease Control and Prevention (CDC) are displayed in Figure 2.

Specifically, the first COVID posting was put up on March 3, 2020 by the Dallas PD. The peak date for postings was April 8, 2020 when 16 COVID-related *Facebook* messages were posted across the 14 police agencies. In general, the police agencies increased their distribution of COVID information in March and early April of 2020. Also, taking the number of COVID posts into consideration, the 14 agencies started broadcasting COVID information on *Facebook* pages before the number of COVID cases had increased steeply in early March 2020. A likely explanation for this finding is that some of these police agencies are located in large cities (with major airports), and COVID outbreaks were first confirmed in such large cities. That posting activity noted, the frequency of police posting of COVID messages decreased throughout the mid-April to May 2020 time period once the number of COVID cases flattened.

Content analysis on COVID-Related posts

While police agencies are not in the same public health leadership role as county and state public health agencies, many voluntarily took on the task of broadcasting COVID information. Among the 2,477 *Facebook* posts, 105 (4.2%) are directly related to COVID-19. A content analysis done on these posts revealed three major themes: 1) science-based facts

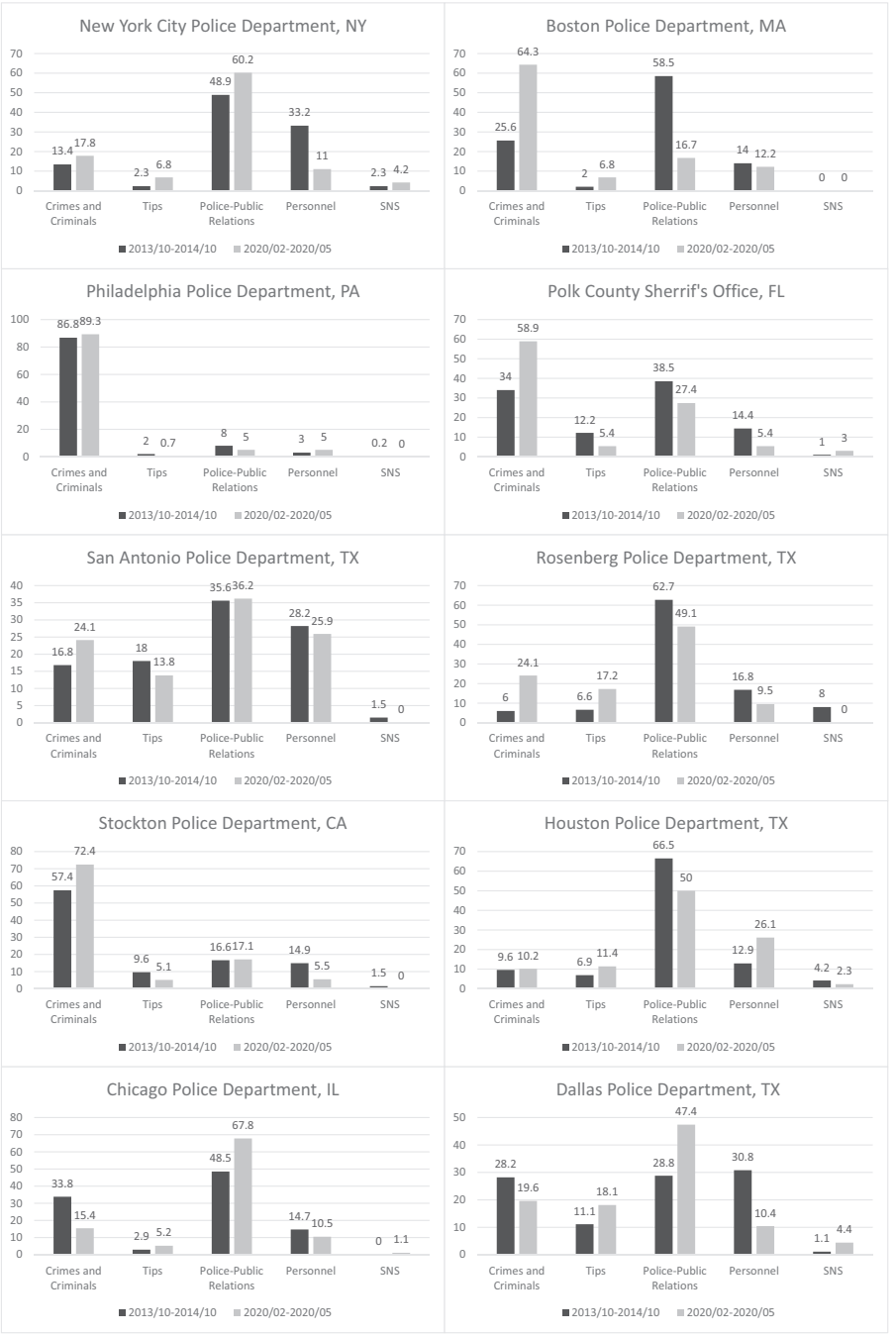

Figure 1.
Primary content of police Facebook posts

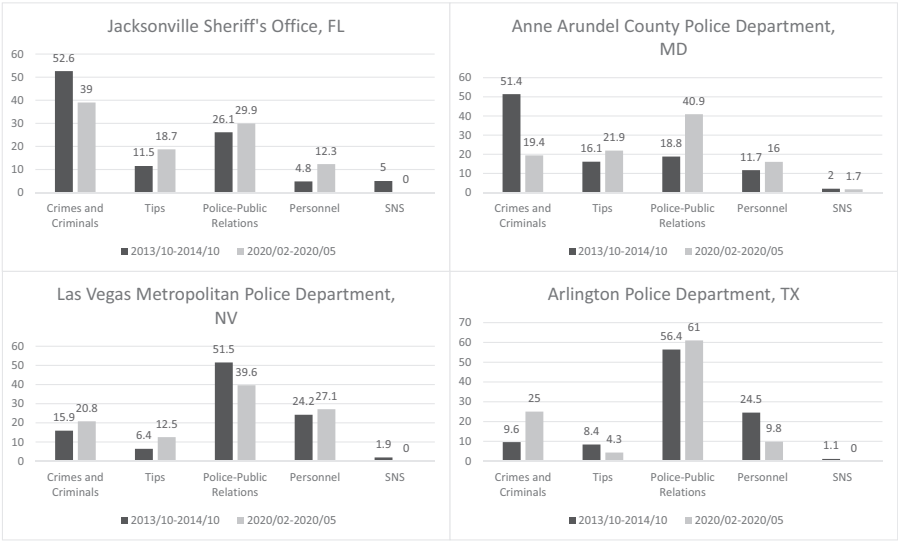

Figure 1.

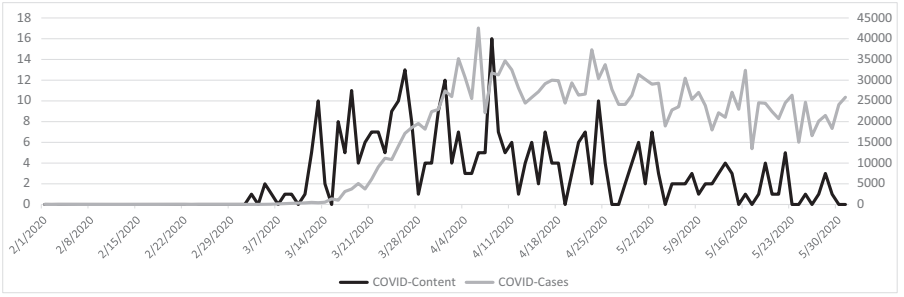

Figure 2.
The number of COVID-related police Facebook posts and COVID cases*

Note(s): *Data collected by Centers for Disease Control and Prevention (CDC). Available at https://covid.cdc.gov/covid-data-tracker/#datatracker-home (accessed May 13, 2021)

concerning COVID-19; 2) updates on COVID-19 pandemic local conditions; and 3) COVID-19 education promotive of public health.

Facts on COVID-19. Since police agencies lack medical expertise, they typically cited official reports and directed the public to professional websites for updated information. At this point early on in the pandemic, police *Facebook* posts served as a bridge between the public and reliable resources. As the pandemic developed, rumors and conspiracies appeared on the internet and spread rapidly. Police *Facebook* posts played a role in filtering out unreliable information. For example, the Dallas PD posted a hyperlink with the text "this website will have the most up-to-date information regarding Coronavirus (COVID-19) in Dallas" on March 3, 2020. The following message was posted by the Boston PD on March 12, 2020.

> If you think you have symptoms of coronavirus, such as fever, cough or shortness of breath, please call your healthcare provider. For more information on how to best to mitigate and lessen the

> spread of COVID-19, please visit: http://boston.gov/coronavirus. #TheMoreYouKnow (Boston PD, March 12, 2020)

The COVID-19 virus was not yet spreading catastrophically back in March of 2020. There were just a few cases in a few major cities, and the police would report them on their *Facebook* pages. For example, the Rosenberg PD posted the following regarding three cases.

> Fort Bend County Health and Human Services is announcing 3 additional travel-related cases of COVID-19. One traveler was not part of the group involved in the other Houston-area cases but was on the same cruise in Egypt at a later date. The cases are as follows: - A man in his 70s who was symptomatic, hospitalized and discharged in good condition to isolation at home. - A man in his 70s who had one day of fever which resolved. He is in isolation at home. - A woman in her 60s who had mild symptoms which have resolved. She is in isolation at home. (Rosenberg PD, March 8, 2020)

COVID-19 updates. The analysis on police *Facebook* posts directly related to COVID-19 suggested that the police were likely to share updates on COVID-19 perhaps as part of their community-building strategy or image maintenance work (Hu *et al.*, 2018). For example, many of the 14 agencies posted information on COVID-related speeches given by mayors (e.g. Chicago PD, IL, March 20, 2020; Houston PD, TX, April 22, 2020; Jacksonville Sheriff's Office, FL, March 17, 2020) and governors (e.g. Las Vegas Metro PD, April 4, 2020). They also made postings that could help the public quickly have access to COVID information. For example, the following posting was put up by the Boston PD on March 18, 2020:

> To get the latest updates on the ongoing efforts being made to lessen and mitigate the spread of the highly contagious coronavirus, @CityofBoston has launched a new daily text service. This is a FREE service. To opt-in, text the word BOSCOVID to 99411. #TogetherWeCanFightThis #SocialDistancingNow (Boston PD, March 18, 2020)

More often, agencies posted updates on police operation times during the pandemic. For instance, Anne Arundel County PD on March 16, 2020 posted, "during the current public health issue of COVID-19, the safety and health of our customers and staff is a top priority. Until further notice, the Public Services window at Police Headquarters is closed for in-person assistance." For instance, on March 16, 2020, the Stockton PD posted this message:

> The Police Operations Lobby at 22 E. Market Street will, however, remain open for now for emergency and urgent matters. For non-emergencies, telephone contact and on-line reporting is recommended. This is a challenging time, and the Stockton Police Department remains committed to ensuring the safety of our community while also being mindful of this quickly evolving health crisis. #cops4communities (Stockton PD, March 16, 2020)

COVID-19 education. The third theme on police *Facebook* posts directly related to COVID-19 indicated that the police would frequently tell citizens how to reduce the risk of viral transmission. The phrases most frequently used were "wash your hands," "follow social distancing guidelines," "avoid nonessential travel," and "stay at home." Some agencies engaged in active messaging. For instance, the San Antonio PD posted five *Facebook* postings on COVID-19 prevention methods in four days:

> Stay at home, San Antonio. We're all in this together. #BeSafe #Protectingandserving (March 24, 2020)

> Hey San Antonio, #StayHome #StaySafe #Weareinthistogether (March 24, 2020)

> Love your city and do your part. Spread facts, not fear. Stay safe. Stay home. Stay calm, San Antonio. (March 25, 2020)

> Let's practice social distancing like our East SAFFE Officers! #socialdistancing #besafe (March 27, 2020)

> Check in on your neighbor while practicing social distancing! Love your city. Do your part. #BeSafe #Socialdistancing (March 27, 2020)

Interestingly, none of these COVID-19 education posts included masking. Most of these COVID-19 education posts were posted in March of 2020 when the CDC had not yet recommended the public use of face masks. Early on the agency opined "CDC does not currently recommend the use of face masks for the general public. This virus is not spreading in the community" (CDC Newsroom, February 12, 2020). Later, on April 3 of 2020 the CDC started recommending that people wear a face mask to prevent viral spread (Gostin *et al.*, 2020; Scheid *et al.*, 2020). This fact likely explains why educating the public to wear a mask was not a theme found in police *Facebook* posts until late April, 2020 [e.g. the Polk County (FL) Sheriff's Office, FL, April 29, 2020; the San Antonio (TX) PD, April 20, 2020)].

Posts with COVID-19 component. Besides police *Facebook* posts that are *directly* related to COVID-19, another 230 posts (9.3%) are *indirectly* related to COVID-19. Among these postings, five are related to crimes and criminals, 32 are related to tips, 145 are related to police-public relations, 35 are related to police personnel, and five are related to social networking sites. The five crimes-and-criminals posts were all about solved cases with a mention of COVID-19. For example, the Rosenberg PD posted the following on April 9 of 2020:

> As a reminder, masks should be worn to prevent the spread of #Covid_19, not rob convenience stores. Well this suspect had the wrong idea and now he's in custody. This afternoon, Rosenberg Police were called to Fast Addy's for an Aggravated Robbery which had just occurred. The suspect displayed a handgun and demanded money. Within minutes, responding Officers located the suspect as he attempted to leave the area on foot. Thankfully the suspect was taken into custody without incident, as he was concealing a loaded handgun in his waistband at the time of his arrest. (Rosenberg PD, April 9, 2020)

Regarding tips, previous studies have found that police agencies not only post traditional crime-related tips (e.g. burglary and robbery) but also tips related to cyber-crimes (Hu *et al.*, 2018). Police agencies also realized that when people were required to stay at home and make many purchases online, they might be attacked more often than in the past by cybercriminals. For example, the Stockton PD posted the following "#TidBitTuesday Avoid scams while finding help during quarantine" on April 7 of 2020. The following is also about a COVID-related scam:

> COVID-19 Scam Alerts. If you think you are a victim on a scam or fraud you may contact the Dallas Police Department via the below methods: • In Person Reporting System • Mail or Email Reporting System • **NEW** Online Reporting System. See flyer for more information. (Dallas PD, April 20, 2020)

Additionally, some types of traditional crimes may increase during the pandemic. For example, the Dallas PD warned people about domestic violence on *Facebook* on April 16, noting "COVID-19 and Family Violence. People who are experiencing family violence can call the National Domestic Violence Hotline 1–800–799-SAFE." In addition, some police agencies had observed that pandemic conditions brought about more hate crimes, particularly anti-Asian hate crimes, and they posted important tips on their *Facebook* pages. For instance, the following was posted by the NYPD on April 18 of 2020:

> The rise in COVID-19 Asian-bias hate crimes is disturbing. We will continue to arrest those responsible and hold them accountable, but we need your help–if you were a victim call 9-1-1 or DM NYPD Crime stoppers to report it so our detectives can vigorously investigate each case. (NYPD, April 18, 2020)

To its credit, the NYPD posted Asian-bias hate crime tips in different languages (e.g. Mandarin and Cantonese) on April 22, 2020.

The majority of police *Facebook* posts which contained a COVID-19 component were about police-public relations. Previous studies have shown that this major theme contains many sub-themes such as newsletters, successful stories of police agency accomplishments, online events, and greetings (see Hu *et al.*, 2018 for details). Previous studies also find that the public is likely to like and make comments on posts of police-public relations (e.g. Hu *et al.*, 2020). A further content analysis on posts regarding police-public relations reveals that the majority of this type of posting mentioned *police gratitude to citizens*. Many police posts noted that agencies were grateful for receiving donations of masks and sanitizers, items in short supply back in the Spring of 2020. The following is typical:

> Thank you to Sewing Masks for a Safe Chicago who raised money to produce 13,000 reusable cotton masks to be distributed to Chicago Police Officers. The masks are handmade by local seamstresses and tailors who are working full time because of the initiative. We are truly grateful for your donation. (Chicago PD, May 8, 2020)

Besides thanking the public for being supportive, many agencies also thanked their police officers and other first responders for sacrificing themselves to keep working in the frontline under great stress. The NYPD posted the following on April 4, 2020:

> New York, we're in this together. We thank the first responders from all across the nation who are putting their lives on hold to help us fight this pandemic on the front lines in NYC. Together, we will get through this. We are all #NYStrong (NYPD, April 4, 2020)

In the meantime, agencies kept posting on *Facebook* that they would continue protecting and serving the public regardless of how severe the pandemic became. For example, on March 31, 2020, the Rosenberg PD posted, "Crime does not stop because of the #CoronaVirus, and that means we will not stop. We've just changed the way we operate a little bit." Similarly, the Las Vegas Metropolitan PD posted, "Updated information about LVMPD operations: The pace for patrol officers has remained unchanged as they continue to respond to calls for service in the wake of the COVID-19 pandemic" on March 18 of 2020.

Agency personnel were often thanked on police *Facebook* posts. Besides sworn police officers, crime scene technicians (the Anne Arundel County PD, March 26, 2020) and even K9s (the Anne Arundel County PD, March 28, 2020) received the gratitude of their agencies and the public on *Facebook*. In the sample a few postings reported that officers were infected with COVID-19, and that some had died from it. For example, on March 31, the San Antonio PD reported its first officer testing positive for COVID-19. The NYPD reported the first of its own officers who died from it on March 27, 2020. This *Facebook* post received 18,428 reactions, 4,252 shares, and 2,787 comments. Similarly, the Chicago PD reported that their first officer died from COVID-19 on April 10, 2020, and the second on April 11, 2020. Both posts generated a large number of reactions, shares, and comments on *Facebook*.

Public preferences on police posts

Public preferences toward police *Facebook* messages differed according to the themes of the post. Table 3 reports the average number of reactions, shares, and comments across the six identified themes. Regarding reactions, the theme of personnel introduction received the highest average number of reactions, and the theme of social networking sites received the lowest average number of reactions, a finding consistent with previous results reported in the literature (e.g. Hu *et al.*, 2020). A series of Sidak multiple-comparisons tests suggested that "covid related" posts received a significantly fewer reactions than "personnel" posts, and that "covid related" posts received about the same number of reactions as "police-public relations", "crime and criminals," "tips", and "social networking sites" posts.

Regarding the number of shares, the theme of personnel introductions again received the highest average number of shares, and the theme of social networking sites received the lowest

average number of shares. The Sidak multiple-comparisons tests outcomes suggested that only the difference between "personnel" vs. "crime and criminals" was statistically significant. In addition, regarding the number of comments, the theme of personnel introduction received the highest average number of comments, and the theme of tips received the lowest average number of comments. The results gleaned from the Sidak multiple-comparisons tests indicated that "covid related" posts received significantly fewer comments than "personnel" posts, and received about the same number of comments as those on "police-public relations", "crime and criminals," "tips", and "social networking sites" posts.

Moreover, a set of chi-square tests showed that police agencies' use of pictures, videos, and hyperlinks in the posts differed across the themes (as shown in Table 4). For instance, police agencies are most likely to include a picture in posts about tips and police-public relations, whereas hyperlinks were most often included in the posts about social networking sites and COVID-specific posts. All these findings suggest that the public reaction to COVID-specific *Facebook* posts did not differ greatly from how they tend to view other types of postings by the police. In general, posts related to police-public relations and personnel were still popular even during the pandemic. However, a series of *t*-tests between COVID-related and non-COVID-related posts suggested that posts with COVID content ($M = 953$, SD = 1,809) had significantly more reactions than posts without COVID content ($M = 554$, SD = 1,285), $t = 3.89$, $p < 0.001$. Also, posts with COVID content ($M = 106$, SD = 253) received significantly more comments than posts without COVID content ($M = 72$, SD = 223), $t = 2.34$, $p < 0.05$. Taken together, these findings suggest that postings with COVID-related content, but not completely about COVID, seemed to be particularly welcomed by the public.

	Mean number of reactions	Mean number of shares	Mean number of comments
Themes of the post (mean)			
Crime and criminals	328	153	67
Tips	273	208	35
Police-public relations	759	218	71
Personnel	1,425	304	167
Social networking sites	172	52	57
COVID	490	249	77
p-value from one-way ANOVA	$p < 0.001^{***}$	$p = 0.0374^{*}$	$p < 0.001^{***}$

Note(s): $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Table 3. Number of reactions, shares, and comments by the themes of Facebook posts

	Use of pictures (%)	Use of videos (%)	Use of hyperlinks (%)
Themes of the post (% yes)			
Crime and criminals	65.5	9.6	12.8
Tips	73.9	11.6	9.1
Police-public relations	70.7	20.4	6.8
Personnel	67.4	24.2	4.4
Social networking sites	54.8	25.8	19.4
COVID	57.5	20.4	15.9
p-value from chi-square test	$p = 0.003^{**}$	$p < 0.001^{***}$	$p < 0.001^{***}$

Note(s): $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Table 4. Use of pictures, videos, and hyperlinks across the themes of Facebook posts

Discussion

Our study employed a mixed-methods approach to explore 14 police agencies' *Facebook* posts before and during the COVID-19 pandemic. In comparing results with those reported in Hu *et al.*'s (2018) study, two of the 14 police agencies changed their social media images from mixer and traditional cop to public-relations facilitator. These changes may be due either to changes in police personnel managing *Facebook* pages, or by public feedback received on past *Facebook* posts. Some agencies remained steadfast in their established patterns; for example, the Philadelphia Police Department's *Facebook* page continued to have a significant proportion of crimes-and-criminals posts (86.8% in 2014 and 88.7% in 2020) during the early stages of the pandemic.

Regarding COVID-related posts in general, postings with exclusively COVID-19 content represented but a small proportion of overall posts during the early pandemic period. This is to be expected. Police agencies are not public health agencies. Content analysis shows that the police relied heavily upon other agencies for accurate information about COVID-19 and ways to hinder its spread. Early posts on COVID-19 recommended that citizens wash their hands frequently, maintain social distancing, avoid nonessential travel, and stay at home as much as possible; postings on masks were not observed until late April after CDC guidance.

The findings reported here suggest that social media platforms have become a routinized tool of police-public communications which can, to some appreciable extent, substitute for the in-person contacts traditionally relied upon in community policing (Grimmelikhuijsen and Meijer, 2015; Walsh and O'Connor, 2019). Many police agencies used *Facebook* posts to educate people about new public safety challenges arising from the pandemic situation, most often in the form of anti-Asian hate crimes, more incidents of domestic violence, and more online purchasing and credit/debit card scams (Hawdon *et al.*, 2020; Piquero *et al.*, 2020; Tessler *et al.*, 2020). In addition, an important finding from the current study is that nearly all of the 14 police agencies in the sample sought to *humanize* their officers by publicly expressing their gratitude to the public for donating protective supplies and demonstrating understanding for how difficult it is to be a first-line responder during pandemic circumstances. Emotion-filled slogans such as "we are in this together," "love your city, do your part," and "we are here with you" were frequently used by the police on *Facebook* to build a common connection with the public. Although the police were on occasion required to arrest people for violating stay-at-home orders, they portrayed a "friendly persuasion" image on *Facebook,* actively seeking public cooperation and expressing gratitude for the public's support.

Some useful policy implications arise from these findings. First, the changes made in two major police agencies' social media images suggest that while the police certainly can use social media as a crime-fighting tool, they are increasingly aware of its considerable proven utility as a police-public relations outreach tool. When pandemic conditions precluded traditional forms of police-public interaction, social media were used frequently by many of the police agencies in our sample. Social media were used to deliver timely information to the public, to gather information from citizens, and to interact with the public in some productive ways (Crump, 2011; Hu *et al.*, 2018; Meijer and Thaens, 2013). The proportion of *Facebook* posts related to police-public relations and personnel increased substantially during the early pandemic months when it was important to humanize the first responders bravely facing the unknown dangers of COVID-19.

Second, it was shown that social media could be a promising tool for distributing COVID-related information, and the public generally paid attention to COVID-related posts. Humanizing the police on social media during the early stages of the pandemic proved to be a good way to stay connected with the public during a time when police desperately needed the public to engage in the co-production of public health outcomes through hygiene practices and social distancing actions. This study, together with other recently published research (e.g. Cartwright and Shaw, 2020; Jeanis *et al.*, 2019; O'Connor and Zaidi, 2020), suggest that the adroit use of social media has

been routinized in many police agencies (Rogers, 2003). Agency policies and budgetary allocations for using social media effectively appear to have been adopted by the agencies studied here, and those actions appear to have paid off during the early stages of the pandemic.

Of course, some study limitations deserve attention. First, the postings data were collected before and at the early stage of the COVID-19 outbreak. We do not know how these police agencies have modified their postings over the whole course of the pandemic. Future research should document posting pattern changes over a long period Second, the current study intentionally collected data from these specific 14 police agencies in order to compare new findings to those reported in Hu *et al.*'s (2018) earlier study of these same agencies. Although the sample included large, medium, and small-sized police agencies, future research should feature a larger sample of diverse local agencies, as most police agencies in the US are small agencies (Hu and Lovrich, 2019). The case study approach (e.g. Hand and Ching, 2020; Hu and Lovrich, 2021) may also be useful to explore a particular major police agency's social media reaction to the pandemic over the whole course of the pandemic. The current study only examined public reactions to police *Facebook* posts by analyzing the number of reactions, shares, and comments. *Facebook* users are trending older, and we could not tell the different emotions embedded in the reaction button in this study (e.g. like, care, sad or angry). Future research should involve collecting enhanced data on citizen views on these police postings.

COVID-19 infection rates have varied as a function of geography. Both the police and the public responses have also varied as a function of partisan orientation. Future research should explore geographic and/or political context when analyzing local police agencies' use of social media in addressing pandemic challenges. Additionally, our study considers police use of *Facebook* only. Future research should analyze other social media such as *Twitter* and *YouTube* regarding this pandemic phenomenon.

In conclusion, this study has contributed to our understanding of police *Facebook* posts before and during the pandemic. The findings suggest that Hu and Lovrich's (2020) concept of E-COP, built on the foundations of Cordner and Perkins (2013), can serve as a promising tool to connect the police with the public when such connection is critical. This study showed that it is possible to continue valuable community-oriented policing outreach under circumstances where in-person contacts become highly constrained. Perhaps the experience of using social media to manage societal pandemic challenges has helped prepare the police for the next great challenge – namely, managing the public dialog over police reform in the aftermath of federal and state legislation affecting police practices, particularly enhancing police officer accountability for the excessive use of force. The lessons learned from their use of social media in addressing COVID-19 pandemic challenges suggest that the essentiality of the adroit use of social media to sustain a community policing philosophy of ongoing active outreach and relationship building for collaborative problem solving (Cordner and Perkins, 2013) will only increase in importance as time goes on.

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Appendix

Themes	Subthemes
Crimes and Criminals	Crime Statistics
	Case-Related: Solved Case
	Case-Related: Unsolved Case
	Case-Related: Potential Case
Tips	Crime-Prevention Tips
	Non-Crime-Related Tips
Police-Public Relations	Newsletter: Onsite Event
	Newsletter: Sports-Related
	Newsletter: Success of Department
	Online Events
	Memorial
	Asking for Help
	Non-Police-Work Content: Greetings
	Non-Police-Work Content: Others
Personnel	Sworn Officer: Introduction of Police Officer
	Sworn Officer: Officer Killed/Injured/illness
	Sworn Officer: Successful Officer
	Sworn Officer: Unsuccessful Officer
	Civilian Employee
	Four-Legged Officer: K9
	Four-Legged Officer: Patrol Horse
	Recruitment: Direct Recruitment
	Recruitment: Indirect Recruitment
SNS	Social Networking Sites

Table A1. Coding scheme: themes and subthemes

Note(s): Adopted from Hu *et al.* (2018). "We are more than crime fighter:" Social media images of police departments, p. 557. Also see Hu *et al.* (2020). Public preferences toward police Facebook posts: A macro-level analysis, p. 234

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