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USE OF SOCIAL MEDIA FOR SOURCING AND VERIFICATION: JOURNALISTIC
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**Abstract**

The adoption of social media by journalists is in transitional phase, but the dependency on it for sourcing can have significant implications for the profession. With more reliance on social media for sourcing, journalists could end up handing over the power of agenda-setting to the sources. In addition, use of information from social media poses a huge challenge of its verification. This study examines the use of social media for sourcing and verification by Pakistani journalists. By using hierarchy of influences model, this study attempted to find the best predictors of use social media for sourcing. This study also explored different verification methods being adopted by Pakistani journalists to verify the content they find on social media platforms. The study found that journalists in Pakistan heavily rely on social media for sourcing and they also use social media for verification purposes. Twitter is being used for both sourcing and verification more than any other social media platform. Routines were the best predictors for using Twitter for sourcing purposes. The presence of organizational policy and reward system were the best predictors of using Facebook and Instagram for sourcing. This study also found that journalists use social media for purposes that represent information subsidy, which can affect the power relation between sources and journalists. For verification of social media content, journalists remain within the social networking sites and go outside using traditional methods and digital tools to authenticate the information. Positive attitude towards social media and trust contributed towards its use for sourcing and verification.

**Chapter I: Introduction**

Social media have enabled journalists to get valuable information they need to complete their jobs in daily routines and in a crisis-situation (Backholm et al., 2017). This practice of using social media is widely adopted by journalists and newsrooms and it serves various purposes related to organizational and personal goals such as developing a story, identifying leads and content, verification of the content, monitoring and keeping track of other media actors, finding eyewitness, and for marketing and promotion of the stories (Deprez & Van Leuven, 2018; Heravi & Harrower, 2016; Lecheler & Kruikemeier, 2016; Paulussen & Harder, 2014; Zhang & Li, 2020).

Media organizations across the globe are using social media for distribution of content and to reach audiences (Hermida, 2012). According to Hermida (2012) social media has changed the relationship between the producer and consumer of the news. Due to affordances of technology, media are not a one-way flow of information anymore, and the citizen along with journalists are playing their part in selection, distribution, and making sense of the events (Hermida, 2012). The introduction of technology is also influencing the sourcing process of journalists and changing the media landscape (Deprez & Van Leuven, 2018).

Social media platforms such as Twitter are being used for information gathering, especially in case of any unforeseen events (Moon and Hadley, 2014). Twitter is also used by journalists for promotion, sourcing, and monitoring other media (Johnson et al., 2019). Social media provides diverse information quickly and it is shaping the way news is gathered and transmitted, and it has become a part of journalists' contemporary toolkit (Heravi & Harrower, 2016). On the other hand, this adoption of social media has created many challenges for sourcing and verification processes such as assessing credibility and authenticity of information, filtering

vast amount of information, and the need to monitor multiple platforms at the same time when journalists lack skills and organizational guidelines about how to gather and validate content. (Backholm et al., 2017; Brandtzaeg et al., 2018; Deprez & Van Leuven, 2018; Fletcher et al., 2017; Zhang & Li, 2020). Journalists are immensely challenged by the sheer amount of information available on social media irrespective of whether it's true or not and they have to spend more time to decipher this information (Xu & Gutsche, 2020).

According to Kovach and Rosenstiel (2021) the verification process separates journalism from other forms of communication, and social media creates challenges for this verification process (Heravi & Harrower, 2016), and verification of social media content becomes more crucial in breaking-news scenarios when journalists are working under time pressure (Brandtzaeg et al., 2016). The information flood is coming from multiple social networking sites and journalists lacking in skills makes the process of verification more challenging, and journalists are reluctant to adopt social media as a platform which they can use to verify the information (Heravi & Harrower, 2016; Lecheler & Kruikemeier, 2016; Zhang & Li, 2020).

Heravi and Harrower (2016) noted that adoption of social media into news workflow is in transitional phase with journalists integrating it into workflow as a source but many of them are reluctant to use it due to lack of trust, intellectual property restrictions, privacy, and organizational guidelines. Their study further suggested that journalists still consider the authority sources as the most trusted for sourcing – relying on the reporters in the field, newswires, print media, and their own direct contact with individuals. To verify information available on social media, journalists tend to go outside these social networking sites to a real-world to check the veracity of information (Heravi & Harrower, 2016).

Gulyas (2017) conducted a survey in seven countries and found similarities in the use of social media by journalists for sourcing and interaction on social networking sites. There were also differences between these countries with some social networking sites being more popular than others, the purpose of using these social media sites, and the perception about the effects (Gulyas, 2017). Journalists who consider themselves social media savvy tend to use it more for sourcing and verification (Heravi & Harrower, 2016). There can be further differences in the use of social media depending on the type of media, type of reporting, and the country where the media is located (Lecheler & Kruikemeier, 2016). Journalists' use of social media depends on various variables, such as location, frequency and attitude towards these tools (Gulyas, 2013). Media type, time spent in journalism, and organization's size affect the use of social media in some context, but it does not give a complete explanation for its adoption by journalists (Gulyas, 2013).

Most of the research regarding social media's adoption by journalists and newsrooms have been done in Western countries. This study adds to the literature from a non-Western context because social media is pervasive and easily accessible in countries like Pakistan, but journalistic practices may differ than those of Western countries. There can also be differences in usage, perceptions, and utility of social media in Pakistani journalists' community.

The purpose of this study is to examine the extent to which journalists in Pakistan use social media for sourcing and what are the prevalent verification methods they use to verify the sources and content available on social media before including in their own reporting. As Gulyas (2017) found differences in journalists' practices from seven countries for using social media, this study explores the practices in a South Asian developing country where journalists have different level of journalism education, resources, training, and skills as compared to more

developed world. This study investigates the usage of social media by television and web journalists because they have more frequent deadlines and less time for investigation from traditional sources. The main themes study explores are to what extent social media is being used for sourcing by Pakistani journalists, what are the prevalent verification methods used to verify information found on social media, how social media is affecting journalistic practices, and relationship between attitude towards social media and its inclusion in journalistic practices.

This study is of scholarly significance for several reasons. Journalists do not show their trust on social media, but they continue to use it for sourcing (Zhang & Li, 2020). Trends on social media also become part of news which have affected the traditional practices of verification (Bouvier, 2019). Thus, it becomes important to examine the relationship between journalistic practices and use of social media when this use is shaping journalistic practices. Journalists use the online information to complement the traditional sources, but they face challenges to verify this information, and due to presence of fake accounts and fake news it is difficult to check the authenticity of the information (Lecheler & Kruikemeier, 2016; Zhang & Li, 2020). Researchers have addressed this question (e.g., Lecheler & Kruikemeier, 2016; Heravi & Harrower, 2016; Zhang & Li, 2020; Paulussen & Harder, 2014; Deprez & Van Leuven, 2018), but there is a need for further investigation on the influence of online information on news production (Lecheler & Kruikemeier, 2016). With an increase in social media's adoption, it is important to examine the effect on relationship between journalists and their sources, how the journalistic practices are being shaped by using social networking sites, what are main influences for adoption of social media for sourcing, and how journalists verify myriad of information found on social media sites.

**Chapter II: Literature Review**

**Hierarchy of Influences Model**

The theoretical framework which guides this study is Hierarchy of Influences model whereas adoption and inclusion of social media, as an outside factor, for work purposes affects the journalistic practices and the content journalists produce. Shoemaker and Reese (2014), in their Hierarchical Influences model, categorized the influences at five levels from macro to micro. The five levels social systems, social institutions, organizations, routines, and individuals have effects on constructing the social reality, and these levels affect the content independently and they also overlap influencing each other (Shoemaker & Reese, 2014). For this study, using the Hierarchical Influences model, the author examines how social media are being adopted at different levels of analysis. This study focuses on social media influences at four levels of analyses: institutional, organizational, routines, and individual. The reason for omitting social system from the analysis is that the social media is an extra-media factor which operates outside geographical, ideological, and cultural boundaries.

At the social institutions level Shoemaker and Reese (2014) categorize the forces that are outside the media organization and can influence the content. At this level different institutions try to shape the media content, but the influence depends on the relative power of the institution in a society (Shoemaker & Reese, 2014). At this level, media power lies outside the organizational setting and these extra-media factors like government, technology, and public relations effect influence the construction of social reality (Shoemaker & Reese, 2014). Media sources influence the content at both routines level and social institutional level, but at the latter level the influence is more systematic and institutionalized (Shoemaker & Reese, 2014). Officials such as Presidents, institutional sources such police, interest groups, and other media

organizations are sources that influence the content at institutional level (Shoemaker & Reese, 2014).

At the organizational level of analysis, Shoemaker and Reese (2014) argued that organizations can influence the content through different variables such as "ownership, policies, goals, actions, rules, memberships, bureaucratic structure, economic viability, and its stability" (p. 130). Employees working at different hierarchical levels in an organization have different perspectives which can influence the way content is shaped and policies made at the top level can override the routines to achieve organizational goals (Shoemaker & Reese, 2014). All employees of an organization act as gatekeepers and consider the suitability of the news and how it will be received by superiors at different levels (Shoemaker & Reese, 2014). For some stories, there can be a more visible control from the top management, and the decisions about these stories can be different from routine decisions (Shoemaker & Reese, 2014). Organizations can affect the content through resource allocation, occupational culture, exercising interdepartmental power within an organization, owner's priorities, concerns about autonomy of journalists when it come into conflict with corporate goals, policy guidelines, and bias towards an interest (Shoemaker & Reese, 2014).

Routine level includes the practices that are commonly followed by large bodies of journalists (Shoemaker & Reese, 2014). "Routines are patterned, routinized, repeated practices and forms that media workers use to do their jobs" (Shoemaker & Reese, 1996, p. 105). Tuchman (1977) called routines as the upspoken knowledge of the occupation which so ingrained that that journalists might not be able to express them properly. The routines are adopted to perform the work more efficiently and those with greater mastery over these routines become professionally more valuable (Tuchman, 1997). Hirsh (1977) also argued in similar lines

and considered routines imposing professional standards on journalists to carry out daily tasks and providing a mechanism for checks-and-balances. Routines are instrumental in ensuring that media respond in expected ways and the set patterns are strictly followed (Shoemaker & Reese, 1996).

Shoemaker and Reese (2014) categorized sources of routines into three domains; "audiences, organizations, and suppliers of content" (p. 164). When media organizations know what audiences want then the content follows the choices of audiences, organizations make routines to make production process economical and efficient, and journalists work around the schedules of suppliers of content due to their dependency to get information (Shoemaker & Reese, 2014).

Routines help journalists to perform their daily tasks such as newsgathering, but the presence of these routines, practices, and constraints can also affect the choices journalists make (Shoemaker & Vos, 2009) and the content they produce (Shoemaker & Reese, 2014). The routines can define some events as newsworthy and others as not newsworthy and can also affect the prioritizing an item (Tuchman, 1977; Tuchman 1978). Cottle and Ashton (1999) noted that adoption of technology to maximize output has impacted journalistic practices because journalists perceive it as an increased pressure to complete their work. Inclusion and use of technology in routines can also affect the gatekeeping process whereas traditionally journalists act as filters to pass and discard information (Shoemaker & Vos, 2009).

Shoemaker and Vos (2009) noted that political, governmental, and other sources can influence what gatekeepers should do. Cook (2006) argued that "news workers constitute only a small set of coauthors of the news, along with officials, experts, political activists, and, occasionally, person-on-the-street" (p. 169). There are different factors which can affect and

shape journalistic routines such as technology and media type (Shoemaker & Vos, 2009). For example, internet-based journalism has different routines because it accommodates the audiences differently (Shoemaker & Vos, 2009). Moon and Hadley (2014) noted that despite the adoption of social media, journalists still maintain the traditional routines of working around official sources, whereas Zhang and Li (2020) noted an integration of social media in sourcing and verification processes.

Individual level influence is comprised of the characteristics that a communicator poses, and these characteristics affect the content that is produced (Shoemaker & Reese, 2014). Advancement in technology and changes in social relationships have changed the ways individuals can be identified, and now, a profession has less influence on how people identify themselves (Shoemaker & Reese, 2014). Shoemaker and Reese (2014) argued that personal identities can influence the content such as in cases of partisan press. Shoemaker and Reese (2014) draw four categories that can affect the content at individual level; "personal demographic characteristics, backgrounds and experiences; current attitudes, values, and beliefs; background, roles, and experiences in professional context; and relative power within an organization" (p. 209).

Social media as an outside force affects the journalistic practices at the institutional level when journalists adopt it to make it work in their favor. It also affects journalistic practices because sources are also posting information on these social networking sites which journalists attend to. At the organizational level, various factors such policies and goals of an organization can influence the adoption and use of social media. Routines can also be another influence when journalists adopt social media to be more efficient in performing their job, finding story ideas,

and leads. Individual characteristics such as attitude towards social media and skill level can also play a role in the use of social media for sourcing and verification.

**Information subsidy**

Shoemaker and Reese (2014) considered sources as having huge impact on media content because they can provide easy access to information which is also less costly for journalists. So, another theoretical context that will guide the study is what Gandy (1982) termed as information subsidy. "Information subsidy is an attempt to produce influence over the actions of others by controlling their access to and use of information relevant to those actions" (Gandy, 1982, p. 61). An information subsidy increases the probability that journalists will tend to use it because of the time pressure and deadlines (Gandy, 1982). Because in the absence of a subsidy, more resource allocation would be required to gain the information, and subsidy provider gives the same information at less cost making it economically viable for journalists (Gandy, 1982).

Gandy (1982) argued that to achieve a goal, journalists may also be provided with information subsidies which can help in reducing the cost of news production and fulfilling the requirements of the organization. Just like a press release, social media posts and other available content on social networking sites provide easy and cheap access to information, and journalists might tend to use these information subsidies to complete their work tasks. Gatekeeper and sources benefit from each other, with sources get access to audience and gatekeepers get access to information (Shoemaker & Vos, 2009). Gandy (1982) equates relationship between gatekeepers and sources with traditional economic markets where journalists engage in these relationships of exchange to fulfil their work duties such as meeting deadlines, to fill the space in newspapers, and fill the time for radio and television. Journalists prioritize their relationships

with sources based on valuable information they provide, and those sources are preferred over others who have proven their reliability for correct information (Gandy, 1982).

Whitney (1981) noted that workload can also affect the choices of journalists, in underload situations journalists consider less news as newsworthy, whereas in overload situations less time is available for a news requiring further scrutiny. Time constraints compel newsrooms to rely more on routines (Whitney, 1981), and due to overload and time constraints social media, such as Twitter, can be an alternative information subsidy for journalists (Moon & Hadley, 2014). Bane (2019) also concluded with similar finding that "added pressure on alternative web-only journalists could push them to gather facts and information from social media when there is less time to conduct personal interviews with primary source" (p. 201). Zhang and Li (2020) found that "Journalists rely on ready-made data and convenient handy information sources, compared with other time-consuming investigative methods" (p. 1205). Heim (2021) noted that "smaller newspapers with fewer resources might be more inclined to draw upon social media as a substitute for original reporting" (p. 413).

The author examines whether journalists in Pakistan use social media platforms for the purposes that represent information subsidy to complete their work. Using social media as an information subsidy can further affect the content that is produced. Shoemaker and Vos (2009) argued that mediated messages that reach people change during the process of passing through different gates, and these messages can also be influenced by those who pass these messages to gatekeepers. Chibnall (1977) also argued how a reporter relies on the experiences of other people to construct the social reality making the relationship between reporter and their sources important. "By the time that copy reaches the sub-editor the most significant decisions have been made – events have occurred, they have been experienced, accounts of experiences have been

constructed for particular audiences, accounts of those accounts have been fashioned and these have either been stored away or transformed into fully-fledged news stories. At every stage selection and processing has taken place" (Chibnall, 1977, p. 7).

**Sourcing and verification before digital age**

Information from sources is most important for news-making because journalists rely on these in-direct experiences for reporting events, and sources' version of reality becomes important in deciding what will get media attention (Shoemaker & Vos, 2009). "If an editor merely follows someone else's lead in deciding how many messages should be created within topic categories, then the editor can make the selection decisions within each topic, but not between topics" (Shoemaker & Vos, 2009, p. 24). The relationship between reporter and sources gets complicated when latter attempts to get the irrelevant information into the story and when there is a direct conflict between the journalistic duty and interest of the source (Chibnall, 1975).

Tuchman (1978) used the term news net to describe how media outlets used to collect news by placing reporters geographically and at important locations around the cities. These locations were chosen because most the events of interest can be found there, and these locations can include "Municipal court, police headquarters, the Federal Court, and City Hall, where reporters' daily rounds bring them into contact with official meetings, press releases, and official documents such as the calendar of the Board of Estimate" (Tuchman, 1978, p. 256). Apart from these allocations of reporters, radio dispatches from different departments such as police and fire department were also monitored (Tuchman, 1978). Reporters were also given access to the information by these departments, but the placement of reporters and witnessing events themselves helped them to define different events as news (Tuchman, 1978). Stringers were also hired to alert the news media of events where reporters could not be fielded (Tuchman, 1978).

Stringers, reporters, and wire services provided most of the news, but the news media also used to send other reporters to the events to find new angles of the stories which were not covered by the wire services (Tuchman, 1978).

Many of the sources for news become available to journalists by working around their routines. Reporters relied on certain sources, such as official bureaucracies and institutions, more than others, and these sources became prevalent in mass media (Gandy, 1982). These sources helped in creating more stories in less time because investigative journalism required more time (Gandy, 1982). These sources acted as facilitators in the news production process and journalists tended to accept information as accurate from these sources which saves their valuable time (Gandy 1982). Press releases, press conferences, briefings, special breakfasts, and lunches were popular news sources for reporters (Gandy, 1982).

Media relied on speeches, interviews, corporate reports, or government hearings as their external suppliers of information (Shoemaker & Reese, 2014). Information generated by public relations was another routine source but less transparent because these are not natural occurrences but created for a purpose (Shoemaker & Reese, 2014). Information also came from informal briefings where the source may not like to be attributed, from leaks that are initiated by the source itself, and from bureaucratic structure of an organization (Shoemaker & Reese, 2014). Journalists considered information from governmental channels more authoritative and economically viable as compared to other methods which required more effort and resource allocation (Shoemaker & Reese, 2014). Livingston and Bennett (2003) noted an increase in the event-driven news, but it did not decrease the reliance on officials, and these were still part of news as much as before even in unpredictable events. "Officials in institutional settings produce press events, and journalists used live feed technologies to cover them with for added drama"

(Livingston & Bennett, 2003, p. 365). Journalists contact administrative officials and party spokespersons for news, and experts for putting an event into context (Shoemaker & Reese, 2014).

Newspapers got most of the content from reporters along with news agencies, but staff reporters gave the newspapers more control and stories that their competitors do not have (Hodgson, 1996). Reporters kept their contacts and call or visited different departments for newsgathering such as police, hospitals, local councils, and public services (Hodgson, 1996). Hodgson (1996) recommended reporters to check facts in reference books, archives, newspaper cuttings, or by telephone inquiry. Reporters verified information while covering the story by taking notes carefully and looking at evidence given during court proceedings, and talking to officials can also prove beneficial (Hodgson, 1996).

**Sourcing in the digital age**

In the digital age, the internet has made its place in journalistic routines for searching information and to keep an eye on the competition (Shoemaker & Reese, 2014). Journalists use the online information for sourcing and developing news stories (Lecheler & Kruikemeier, 2016), and social media have become an important tool for information gathering, newsgathering, and monitoring purposes (Larsen, 2017; Lysak et al., 2012; Weaver & Willnat, 2016). Journalists use the networked environment in their favor to get access to the information otherwise hard to get, and the nature of social media allows journalists to track and retrieve that information to use in their reporting making it an addition to other available sources (Larsen, 2017).

Moon and Hadley (2014) found that journalists have adopted the social media tools in their reporting along with traditional sources, with television relying on Twitter more than

newspaper, and both relying more on Twitter for soft news (Moon & Hadley, 2014). They also found that television relies more on Twitter as a direct source, while newspapers rely on Twitter more for soft news, and this can be due to the nature of the medium because newspapers have more time for further investigation. Overall, journalists have maintained their routine practices along with adoption of Twitter as a news source (Moon & Hadley, 2014). Journalists also use information found on social media platforms and apply various strategies to verify the content and source it is coming from (Brandtzaeg et al., 2016). The adoption of social media by journalists is an indication of its importance and an indication of changing attitudes towards social media (Heravi & Harrower, 2016).

Being an essential part in journalism workflow social media is used to source leads more than some traditional sources, but its full adoption is in transitional phase (Heravi & Herrower, 2016). A national survey conducted in Ireland with working journalists revealed that sourcing as the most common use of social media and two-thirds of them use social media daily for identifying leads and more than half of them use it for sourcing content (Heravi & Harrower, 2016). Social media platform Twitter is very popular amongst journalists and young people in Ireland, and journalists working for large organizations, online publications, and those who cover sports, science, and technology use it more frequently (Heravi & Harrower, 2016). Journalists who consider themselves social media savvy use it more often for sourcing and verifying information, but social media serves as an additional platform for sourcing rather than a separate platform (Heravi & Harrower, 2016).

Weaver and Willnat (2016) found that US journalists use social media for information gathering, finding ideas for stories, to remain in touch with the audience, keeping a check what other organizations are doing, and looking for a breaking-news event. Most journalists had

positive perception of use of social media in their work, but they also expressed fears of compromising accuracy over speed (Weaver & Willnat, 2016). Lysak et al. (2012) also concluded with similar findings where journalists rely on social media for newsgathering, but they were also skeptical about the value and reliability of the information.

Results from a survey of 255 journalists in Hong Kong suggested that journalists still rely on offline channels for sourcing and verification, with interview and press conference as the dominant method and social media serves a complementary tool (Zhang & Li, 2020). Journalists' primary sourcing is done from elite or established sources such as officials (Zhang & Li, 2020).

Heim (2021) did a content analysis of *New York Times, Washington Post, and USA Today* stories and concluded that Twitter will continue to supplement traditional sourcing methods. These news outlets mostly cited tweets of political figures' while tweets from non-official sources received the least representation, and it can be due to the reason that citing Tweets of officials might be a safer practice due to verified accounts and non-verified accounts can turn out to be imposters (Heim, 2021). Tweets from the citizens received representation only in 7.5 percent of the stories, and even for topics about politics and sports, reporters were interested in the comments from politicians and athletes rather than including views of public (Heim, 2021). A similar pattern was noted in the other beats and journalists included tweets from police and fire departments more than the tweets of victims and eyewitnesses (Heim, 2021). Heim (2021) also cautioned about the implications if tweets substitute the traditional reporting because journalists could lose their control over news agenda and public figures can manage the press without even facing them.

Knight (2012) analyzed the national British newspapers for the use of social media for sourcing in coverage of Iranian elections in 2009. Her study did not find a widespread use of

social media as a news gathering tool, although social media sites were used and quoted. Largely, newspapers relied on official and established sources and only 29 percent of stories mentioned social media as a source (Knight, 2012). Knight (2012) also noted that newspapers did not identify the channel of communication for a sizable number of sources. Journalists used to tell how communication with source occurred but with the increased use of social media, they might not feel it necessary to identify every instance of communication that occurs using these tools (Knight, 2012). Paulussen and Harder (2014) also noted a low number of articles quoting sources from social media but journalists did consult social networking sites to keep themselves updated. Heravi and Harrower (2016) noted more reliance on authority sources by journalists because they put more trust on authority sources as compared to social media sources. Sourcing from social media does not remain at the same level all the time, it does fluctuate (Heravi & Harrower, 2016).

Johnson et al. (2019) called social media platform Twitter a 'press club' where journalists keep an eye on competition and also use it for promotional, conversational, and sourcing purposes. "About two-thirds of economic journalists under study used Twitter to share messages and links with their followers" (Johnson et al., 2019, p.325). Johnson et al. (2019) noted that journalists not only follow colleagues but also other groups such as politicians, government actors, business professionals, civil society, and economic experts. So, "Journalists use Twitter to monitor and network with colleagues and institutionally affiliated actors that can be suitable as sources for their news stories" (Johnson et al., 2019, p. 322). They described the journalists' following behavior as a proxy of their sourcing practices, and people followed by journalists are likely to influence them in the online environment. The more a journalist is active on Twitter the more likely they will be open to variety of sources (Johnson et al., 2019).

Journalists use social media to extend their reach to their sources, as Deprez and Van Leuven (2018) noted journalists use Twitter to connect and speed up their access to elite sources rather than using it to look for alternative sources. They investigated the "following" behavior of journalists which revealed top-down actors being overrepresented as compared to ordinary citizens. Journalists used Twitter mostly to monitor other journalists and media organizations to keep an eye on the competitors (Deprez & Van Leuven, 2018).

There can be differences in social media use depending on the media type, Bane (2019) found that web-only publications quoted Twitter sources in higher proportion 31% as compared to print publication 5%, but web-only publications quoted fewer official sources as compared to print publications. Print publications used Twitter quotes to supplement an article and web-only news organizations used it as an information and fact gathering tool (Bane, 2019). Bane (2019) mentioned three reasons for these differences: space limits in print medium, Tweets containing additional images or visuals and without them Tweets will not make sense, and difference in values between journalists from both types of organizations. Paulussen and Harder (2014) also argued that social media is not a dominant source of information in the newspapers' content and due to the credibility issues journalists prefer official sources.

Journalists prefer to use the social media accounts of people from their real-world network such as influential people and other media organizations which suggests that social media provides new ways of accessing information from elite sources instead of providing new sources (Heravi & Harrower, 2016). Deprez and Van Leuven (2018) also noted that journalists use Twitter to connect with trustworthy elite sources to increase their accessibility rather than looking for alternative sources. Lecheler and Kruikemeier (2016) also noted that journalists use online sources for searching but still show a strong tendency to consult elite sources. Deprez and

Van Leuven (2018) noted an overrepresentation for elite sources and underrepresentation for ordinary citizens when it comes to following someone on Twitter, and journalists consider ordinary citizens important to add a human perspective to the stories. Dylko et al. (2012) also found a domination of elites in sourcing and news production in online news.

The need to take information from social media can arise out of a sudden event, Rauchfleisch et al. (2017) noted that journalists used user-generated content on Twitter during the first hours of Brussels attack in 2016 which provided them on-site information and access to material, Lecheler and Kruikemeier (2016) also noted a reliance on social media when there is no direct access or when journalists report on soft news. Zhang and Li (2020) concluded that in the news production process social media serves as a complementary tool not a dominant way of gathering news.

According to Hermida (2013) networked communication space has affected the journalistic norms due to the hybridity of old and new approaches and have caused change in the previously held norms. Journalists placed Facebook as an active participant within the news ecosystem (Carlson, 2018), Parmelee (2014) found a relation between politicians' tweets and their subsequent use by journalists that suggested first and second level agenda building. Reporters noted the effect of tweets on their coverage of stories and selection of sources (Parmelee, 2014).

The literature suggests that journalists are adopting social for media sourcing in their daily routines and use it to perform their professional duties, but at the same time they have reservations about the credibility of information available on these platforms (Backholm et al., 2017; Deprez & Van Leuven, 2018; Heravi & Harrower, 2016; Lecheler & Kruikemeier, 2016;

Paulussen & Harder, 2014; Zhang & Li, 2020). This inclusion of social media into routines can affect journalistic practices and the content they produce.

**Verification of social media content**

Social media platforms provide a huge quantity of information through organic and inorganic means and journalists need skills and competence to use this information (Larsen, 2017). Brandtzaeg et al. (2018) found that journalists relied on manual processes to verify information they find online and lacked awareness about the available resources for fact-checking. In addition, they also suggested that there is no standard method to verify information from social media and journalists run the risk of spreading unverified information. Rauchfleisch et al. (2017) considered the editorial guidelines insufficient to guide journalists how to source and verify information during a crisis-situation. Journalists see the available verification tools promising and depending on them in the future, but they are also skeptical of losing control to a third-party and concerned about the reliability of the services of a third-party.

Results from a national survey in Ireland revealed that half of the journalists do not use social media for verification, and they turn to other methods for this purpose showing their reluctancy to use this platform for verification purposes (Heravi & Harrower, 2016). To validate social media content, journalists tend to consult the official sources and network outside the social media (Heravi & Harrower, 2016). Zhang & Li (2020) found that "cross-checking is conducted via interviews, data released by credible authorities, colleagues, and other news organizations" (p. 1205). They also found an inverse relationship between using social media for verification and verifying information using traditional methods. In China, journalists tend to rely on offline verification of sources and information due to the presence of fake news on online platforms (Xu & Gutsche, 2020).

Rauchfleisch et al. (2017) studied how journalists used the user-generated-content during the Brussels attack and found journalists used Twitter to get information because it provided them quick access, and many journalists did not verify the content and authenticity of the pictures and information. They have found that most of the journalists only asked for the right to use the information and did not ask about the ownership or location of the source. Most of the tweets used were from media professionals but the content was never verified (Rauchfleisch et al., 2017).

Fletcher et al. (2017) noted that traditional verification strategies may not be able to cope with the information available on social media platforms. Pressure of deadlines on journalists working with web-only publications can also push them to rely on and gather facts from social media when there is less time to crosscheck with the primary source (Bane, 2019). Boczkowski (2009) found that difference in speed of the journalists' work also shapes the experience of time, where journalists think of a story as having a short life cycle and they want to report and update it as quickly as possible due to competition. When timeliness does not shape newsworthiness, then journalists have more time for research and to interview sources (Boczkowski, 2009). Boczkowski (2009) noted a higher level of stress in journalists who were facing temporal pressure as compared to those who had fewer deadlines and longer period to complete the stories. Boczkowski (2009) also noted that temporal constraints left journalists with little time for traditional sourcing and journalists without temporal constraints followed conventional sourcing practices.

There have been attempts to measure the credibility of a social media account using its profile metrics, but this credibility score is not useful for news, consequently, journalists try to measure the credibility of social media accounts from the profile and number of followers

(Fletcher et al., 2017), which again does not guarantee for obtaining accurate information. The researchers have concluded that "contributors can be imbued with credibility if they are followed by other credible contributors, thus demonstrating a relational dimension to credibility assessment" (Fletcher et al., 2017, p. 30). Constant stream of data and information make it difficult for journalists to reach the original creator of the that information (Backholm et al., 2017). During a crisis-situation, a user-friendly tool can help journalists by collecting information from multiple platforms, but journalists lack trust on algorithms, thus keeping the decision-making about content's trustworthiness as a manual work (Backholm et al., 2017). Heravi and Harrower (2016) also noted the patterns for verification where half of the respondents do not use social media for verifying information and they chose other methods for this purpose. For verification of the content on social media, journalists again rely on the traditional sources, and they use the official sources and contacts outside the social media (Heravi & Harrower, 2016).

To investigate what verification method journalists are using to verify information they find on social media, Brandtzaeg et al. (2016) came up with five different categories. These categories are "(1) using/following trusted sources, (2) accessing eyewitnesses and authentication of sources, (3) using traditional journalistic methods, (4) Multimodal verification and verification tools, and (5) work around methods such as including a disclaimer" (Brandtzaeg et al., 2016, p. 328). They found that journalists are relying on both traditional methods and advanced online verification tools to verify text, images, videos, and sources. Fletcher et al. (2017) argued about the importance of adopting digital tools which can help in getting credible information, this study will use five categories developed by Brandtzaeg et al. (2016) to see if journalists in Pakistan use any of them or all of them.

**Attitude and social media use**

Inclusion of social media into journalistic practices is in transitional phase with journalists considering it having a positive impact on their work, but they are reluctant to use it for verification purposes (Heravi & Harrower, 2016; Weaver & Willnat, 2016). Weaver and Willnat (2016) found in their study that most of the journalists reported a positive impact of social media on their work, and a very low percentage of journalists reported negative impact. Heravi and Harrower (2016) found that Journalists have integrated social media into their work for sourcing and gathering a lot of information using it, but at the same time they are reluctant to trust it for verification. In the survey, only 12% of the respondents stated that social media can be trusted and most of the journalists, especially older and having more professional experience, still consider authority sources as the most trusted (Heravi & Harrower, 2016). Young journalists put more trust on social media, and journalists covering sports, science, and technology use it more frequently (Heravi & Harrower, 2016). Journalists belonging to larger organizations and those working for online publications use social media more frequently (Heravi & Harrower, 2016). Heavy use of social media is also related to trust on the medium and those who use social media more frequently are likely to trust it (Heravi & Harrower, 2016) and those who show more trust on social media are likely to use it more for sourcing and verification (Zhang & Li, 2020).

Despite their apprehensions about the effect of social media on professionalism, journalists continue to use it for sourcing (Zhang & Li, 2020). The heavy users of social media for sourcing and verification were less likely to verify the information by a traditional method of interview (Zhang & Li, 2020). And "the more journalists believe that social media is a reliable news source, the more likely the journalists will use social media for sourcing and verification" (Zhang & Li, 2020, p. 1206).

**Media in Pakistan**

Since 1947, broadcast media was dominated by the state and Radio Pakistan being the main source of information and entertainment until Pakistan Television was launched in 1964 (Pakistan Electronic Media Regulatory Authority, 2020). Siraj and Hussain (2017) found that in the early 2000s, one state-controlled television and dozens of radio stations were functional in Pakistan, but the economic boom in telecom industry, commercialization, and globalization were the main factors that compelled the then government to allow more media organizations to operate in Pakistan. According to the annual report of Pakistan Electronic Media Regulatory Authority (2020) 106 satellite television licenses were issued, and amongst them 30 are news and current affairs, 40 are entertainment, 22 are regional languages. There were 257 FM radio licenses issued and among them 196 are commercial and 61 are non-commercial (Pakistan Electronic Media Regulatory Authority, 2020). The regulatory body for broadcast also issued 43 landing rights permissions, 6 mobile TV service licenses, 11 internet protocol TV licenses, one direct-to-home, and 4062 cable TV licenses (Pakistan Electronic Media Regulatory Authority, 2020). On the print side, All Pakistan Newspapers society (n.d.) has 437 member publications which include daily, weekly, fortnightly, and monthly newspapers which are published in Urdu, English, and various local languages.

After the new players joined the broadcast sector, the infrastructure of the media industry improved in terms of technology, more skilled workers, and media education (Siraj & Hussain, 2017). Siraj and Hussain (2017) found that Pakistani media industry is dominated by private ownership, and majority of workers were males and mostly covers political news. Gul et al. (2017) found six groups as dominant players in Pakistani media industry which were Jang/Geo, Nawa-i-Waqt, Dawn, Lakson/Express, Daily Times, and ARY.

Siraj and Hussain (2017) presented factors that influenced journalistic autonomy in Pakistan which were both external and internal to organization such as state, advertising, ownership, laws, editorial policy, and supervisors. They termed the relationship between government and media as a hate and love relationship. Rasul and Proffitt (2013) argued that the regulatory body for broadcast media failed to achieve its goal of creating a diverse media, and it has worked as tool for government to pressurize the hostile media. According to its annual report, Pakistan Electronic Media Regulatory Authority (2020) issued 335 show cause notices, 118 pieces of advice, 20 warnings, and imposed 23,100,000 PKR fines on various satellite channels during the years 2019 and 20.

Despite having a vibrant media, journalists in Pakistan face continuous threats in various forms, Reporters without Borders (2023) ranked Pakistan 150th out of 180 countries on its press freedom index and declared it as one of the deadliest countries for journalists. International Press Institute (2023) documented 35 press freedom violations in Pakistan during the six months from October 2022 to March of 2023. State and non-state actors influence the media (Yusuf & Schoemaker, 2013), government curb the press freedom through laws and trying to buy allegiances of journalists and news outlets (Mezzera & Sial, 2010). On the journalistic autonomy, Siraj and Hussain (2017) found that higher management such as editors enjoy more autonomy as compared to the lower staff.

From the literature above, the author has formulated the following research questions and hypotheses.

RQ1: To what extent do Pakistani journalists use social media for sourcing?

RQ2: To what extent Pakistani journalists use social media as the only source in their stories?

RQ3: For popular social media platforms, which Hierarchy of Influences concepts predict journalists' use for sourcing?

RQ4: To what extent do Pakistani journalists use social media for verification?

RQ5: What are the verification strategies and tools do Pakistani journalists use to verify the information found on social media?

RQ6a: Is there a relationship between attitude towards social media and use of social media for sourcing?

RQ6b: Is there a relationship between attitude towards social media and use of social media for verification?

RQ7: Do journalists facing greater workload pressures use social media more for sourcing?

RQ8: Do journalists in Pakistan use social media for sourcing which represent information subsidy?

H1: In the breaking-news scenario, journalists will rely more on social media for sourcing.

H2: Those journalists who rely more on social media for sourcing are more likely to use it for verification purposes.

H3a: Journalists covering soft news are more likely to use social media for sourcing than the journalists covering the hard news.

H3b: Journalists covering soft news are more likely to use social media for verification than the journalists covering the hard news.

H4a: The higher the trust of journalists in social media, the higher the use of social media will be for sourcing by journalists.

H4b: The higher the trust of journalists in social media, the higher the use of social media will be for verification by journalists.

H5a: Journalists who perceive themselves to be more skillful in using social media will use it more for sourcing.

H5b: Journalists who perceive themselves to be more skillful in using social media will use it more for verification.

H6a: The higher the age of journalists, the less likely they will use social media for sourcing.

H6b: The higher the age of journalists, the less likely they will use social media for verification.

**Chapter III: Method**

This study used the survey instrument containing 90 statements excluding question about demographics (see Appendix) and sent it to seven news organizations operating in Pakistan. Research questions sought answers to broader journalistic practices related to the use of social media for sourcing and verification of the content found on these social media platforms. A survey method was appropriate to collect information from a larger number of participants to investigate the integration of social media into journalistic practices. In previous studies, researchers have used the survey method to investigate the journalistic practices related to social media (e.g., Heravi & Harrower, 2019; Zhang & Li, 2020). Wimmer and Dominick (2014) stated that a survey methodology can be appropriate to explore the existing situation and attitudes, and it can also help in explaining these situations such as relationships between variables. This survey also explores the relationship between attitude towards social media and its use for sourcing and verification. Wimmer and Dominick (2014) mentioned several advantages of surveys and some of them are applicable to this study such as investigating patterns in natural settings, cost effectiveness as this survey was online, collecting large amount of data, and no geographical limitations as this survey was conducted with Pakistani journalists.

The survey was sent to six Pakistani television news channels operating at national level and one British digital franchise, The Independent Urdu, a web news outlet operating inside Pakistan in the national language of the country. Gallup Pakistan (2012) ranked these Pakistani television news channels in a top 10 list based on their reach. Other television channels in the list were excluded because they were either state television or operating as a local channel.

Due to unwillingness of media organization to share the contact information of their employees, this study adopted the purposive sampling, and the survey was distributed through

contact persons known to the researcher. This study has used the name Twitter (now it is called X) because name changing happened after the distribution of the survey and the name Twitter was used in the survey instrument.

**Variable measures**

The survey was designed to explore uses of social media for sourcing, and it also included statements that allowed measuring influences accounted for use of social media for sourcing using Hierarchy of Influences model as a theoretical framework. The survey also included statements to explore whether journalists use social media for verification purposes and what methods they deploy to verify the content found on social media. To explore verification methods, five categories developed by Brandtzaeg et al. (2016) were used to guide the survey statements. Statements were included to measure the attitude and workload pressures faced by the participants. An intensity scale was used, and respondents were asked to record their level of disagreement and agreement on a 7-point Likert scale.

The survey asked several statements for each level of Hierarchy of Influences model to measure the influences on social media use. At the institutional level influences two constructs were created to measure the influences, and six statements were indexed to create a new variable measuring the influence of institutional sources (Cronbach alpha = .863), and six statements were indexed to create a new variable measuring inter-media agenda and market competition (Cronbach's alpha = .867). At organizational level two constructs were created to measure influences, and five statements were indexed to create a new variable measuring organizational policy and rewards (Cronbach alpha = .691), and three statements were indexed to measure the role of economy (Cronbach's alpha = .511). At routines level, one construct was created to measure influences and eight statements were indexed to create a new variable measuring

influence at routines level (Cronbach's alpha = .869). To measure the use of social media for sourcing, five statements were combined to create a new variable (Cronbach alpha = .629).

To measure the use of social media for verification, five statements were indexed to create a new variable (Cronbach's alpha = .773). This study used the five categories developed by Brandtzaeg et al. (2016) for verification of the social media content and the survey included several statements related to these categories. Two statements were indexed to create a news variable measuring the use of "trusted sources" (Cronbach alpha = .618), four statements were indexed to create a new variable for "accessing eyewitnesses and authenticating sources" (Cronbach's alpha = .726), four statements were indexed to create a new variable for using "traditional methods" (Cronbach's alpha = .520), and two statements were indexed to create a new variable measuring use of "verification tools" (Cronbach's alpha = .902). For the fifth category of "workaround methods", one statement was included in the survey.

To measure the attitude towards social media, four statements were indexed to create a new variable (Cronbach's alpha = .766). To measure the workload pressures, three statements were indexed to create a new variable (Cronbach's alpha = .697).

**Chapter IV: Results**

The survey was sent to approximately 483 journalists and 226 returned the survey. After deleting those which were incomplete or missing a large quantity of data149 responses were analyzed, which gives an approximate response rate of 30.85%. The numbers are approximate because the survey was distributed by contact persons working in media organization. An effort was made by the author to get the exact number from all the contact people but a few of them were unable to give the exact number. The responses received were largely from television news channels (88.6%) and few from news website (5.4%), with 46.1% working as reporters and 53.9% working in newsrooms in different capacities such as copy editor, assignment editor, news producer, and news anchorperson. There were 79.2% males, 15.4% females, and 5.4% respondents did not mention gender. The age of the respondents ranged from 21 to 67 years with a mean of 39.70. Experience ranged from one year to 41 years with a mean of 16.17. For education, 67.8 percent of the respondents reported having a master's degree.

**RQ1: To what extent do Pakistani journalists use social media for sourcing?**

The descriptive results indicate that journalists in Pakistan do use social media for sourcing purposes and some platforms were more popular than other. Twitter stands out from the list of social media platforms mentioned in the survey where 82.8% of the respondents agreed that they use Twitter for sourcing purposes, 14.5% disagreed, and 2.7% neither disagreed nor agreed for using it for sourcing purposes. For using Facebook for sourcing purposes, 60.6% of respondents agreed, 30.7% disagreed, and 8.7% neither disagreed nor agreed. For YouTube, 55.6% of the respondents agreed to use it for sourcing purposes, 28.2% disagreed, and 16.2% neither disagreed nor agreed. For Instagram, 31.9% respondents agreed that they use it for sourcing purposes, 55.6% disagreed, and 12.5% neither disagreed nor agreed. Respondents were

also asked if they use any other social media for sourcing purposes which was not mentioned in the list provided to them. For this, 74.8% of respondents agreed that they use other social media platforms for sourcing purposes, 18.2% disagreed, and 7% neither disagreed nor agreed.

**Table 1. Do you use the following social media for sourcing purposes? (1 = Strongly disagree; 7 = Strongly agree)**

| Social media platform | Agree (%) | Disagree (%) | M | SD | N |
|---|---|---|---|---|---|
| Twitter | 82.8 | 14.5 | 5.46 | 1.65 | 145 |
| Facebook | 60.6 | 30.7 | 4.40 | 1.69 | 137 |
| YouTube | 55.6 | 28.2 | 4.43 | 1.72 | 142 |
| Instagram | 31.9 | 55.6 | 3.39 | 1.77 | 135 |
| Other social media | 74.8 | 18.2 | 5.06 | 1.67 | 143 |

**RQ2: To what extent do Pakistani journalists use social media as the only source in their stories?**

The descriptive results indicate that journalists in Pakistan do not use social media as the only source in their news. For Twitter, 61.9% of the respondents disagreed that they use it as the only source, 34.5% agreed, and 3.6% neither disagreed not agreed. For Facebook, 73.1% of the respondents disagreed that they use it as the only source, 23.1% agreed, and 3.8% neither disagreed nor agreed. For YouTube, 73.9% of the respondents disagreed that they use it as the only source, 20.1% agreed, and 6% neither disagreed nor agreed. For Instagram, 79.4% of the respondents disagreed that they use it as the only source, 13% agreed, and 7.6% neither disagreed nor agreed. For other social media platforms and their use as the only source in news, 57.2% disagreed, 33.3% agreed, and 9.5% neither disagreed nor agreed to it. This result demonstrates that journalists in Pakistan do not consider social media sources sufficient and include information obtained from other sources in their news along with social media sources.

**RQ3: For popular social media platforms, which Hierarchy of Influences concepts predict journalists' use for sourcing?**

To measure the best predictors for use of popular social media platforms for sourcing, variables at four levels of Hierarchy of Influences Model were entered in a theoretical sequence from macro to micro (see Table 2). The first block uses two measures of institutional influences; institutional sourcing, and inter-media agenda and market competition. The second block uses two measures of organization influences; policy and reward for using social media, and economic reasons for using social media. The third block contains measure of routines, and fourth block contains demographics as individual influences on social media use.

After entering variables of Hierarchy of Influences from macro to micro, four regression models were obtained representing each dependent variable; use of Twitter for sourcing, use of Facebook for sourcing, use of YouTube for sourcing, and use of Instagram for sourcing.

For use of Twitter for sourcing, the model explained 11% of the total variance and routines was the only significant predictor of Twitter use for sourcing. The positive beta weight indicates a positive relationship between routines and use of Twitter for sourcing purposes. In other words, journalists have incorporated Twitter for sourcing purposes in their daily routines and they use it to complete their journalistic work. This result indicated that journalistic routines encourage journalists to use Twitter for sourcing purposes.

For use of Facebook for sourcing, the model explained 11.9% of the total variance and policy and reward, and skills were significant predictors of Facebook use for sourcing. The positive beta weights for both independent variables indicate a positive relationship with Facebook use for sourcing. In other words, journalists working with organizations that have a policy and reward system for using social media use Facebook more for sourcing than those journalists working with organizations that do not have a policy and reward system. Or journalists working with those organizations that do not have policy and reward systems for

using social media use Facebook for sourcing less than those journalists working with

organizations that have a policy and reward system. This result indicates that policy and reward

system at organizational level encourages use of Facebook for sourcing purposes.

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**TABLE 2**
Regression Models – Standardized Beta Weights
and $R^2$ for Institutional Sourcing, Intermedia Agenda and Market Competition, Policy
and Reward, Routines, and Demographics on use of Twitter, Facebook, YouTube, and
Instagram for sourcing.

| Variables | Twitter | Facebook | YouTube | Instagram |
|---|---|---|---|---|
| Institutional Sourcing | .219 | .199 | .119 | .072 |
| Intermedia Agenda and Market Competition | -.095 | -.076 | -.200 | -.186 |
| Policy and Reward | .101 | .242* | -.009 | .350** |
| Economy | -.126 | .147 | .154 | .179 |
| Routines | .297* | -.006 | .068 | -.070 |
| Experience | .082 | -.023 | -.006 | .038 |
| Skills | .123 | .249* | -.210 | .088 |
| Gender | .036 | -.143 | -.044 | -.028 |
| Age | .014 | .027 | .032 | -.236 |
| Education | .157 | .061 | -.144 | -.123 |
| Cumulative Adjusted $R^2$ | .11 | .119 | .012 | .103 |
| N | 145 | 137 | 142 | 135 |

*$p \leq 0.05$ **$p \leq 0.01$ ***$p \leq .001$

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At individual level, skill was a significant predictor of Facebook use for sourcing. The

positive beta weight indicates that skills have a positive relationship with Facebook use for

sourcing. In other words, journalists with more skills to use social media use Facebook more for

sourcing than those journalists with less skills. Or journalists with less skills to use social media use Facebook less for sourcing purposes. This result indicates an influence at individual level for use of Facebook for sourcing.

For use of YouTube for sourcing, the model explained1.2% of the variance and none of the variables from Hierarchy of Influences was significant. For use of Instagram for sourcing, organizational policy and reward were the significant predictors and the model explained 10.3% of the total variance. The positive beta weight indicates a positive relationship between organizational policy and reward, and use of Instagram for sourcing. In other words, journalists working with organizations that have a policy and reward use Instagram more for sourcing than those journalists working with organizations without a policy and reward. Or journalists working with organizations that do not have policy and reward system use Instagram less for sourcing than those journalists working with organizations that have a policy and reward system. This result indicates that policy and reward at organizational level influences the use of Instagram for sourcing purposes.

**RQ4: To what extent do Pakistani journalists use social media for verification?**

The descriptive results provide a mixed picture of using social media for verification purposes by Pakistani journalists. Pakistani journalists are using Twitter for verification clearly more than any other platform. Nearly 3 of 4 respondents reported using Twitter to verify the information, while less than half reported using popular social media Facebook and YouTube.

**Table 3. Do you use the following social media for verification purposes? (1 = Strongly disagree; 7 = Strongly agree)**

| Social media platform | Agree (%) | Disagree (%) | M | SD | N |
|---|---|---|---|---|---|
| Twitter | 73.9 | 22.5 | 4.90 | 1.74 | 142 |
| Facebook | 44.7 | 48.2 | 3.76 | 1.74 | 141 |
| YouTube | 43 | 47.9 | 3.76 | 1.72 | 142 |
| Instagram | 29.6 | 52.1 | 3.46 | 1.66 | 142 |
| Other social media | 56.9 | 31.9 | 4.41 | 1.69 | 144 |

And fewer than a third reported using Instagram for verification of information. More than half of the journalists reported using other social media platforms platform for verification which were included in the provided list.

**RQ5: What verification strategies and tools do Pakistani journalists use to verify the information found on social media?**

To answer this question, five categories for verification of social media content developed by Brandtzaeg et al. (2016) were used in the study. These categories for verification included (a) "using trusted sources", (b) "accessing eyewitness and authenticating sources", (c) "using traditional journalistic methods", (d) "multimodal verification and verification tools", and (e) "work around methods" (p. 328). Journalists in Pakistan reported using all these five categories to verify the information they find on social media. Journalists reported mostly using the category of accessing eyewitness and authenticating sources, followed by using traditional methods to verify information, multimodal verification and verification tools, by following trusted source, and workaround methods respectively.

More than 90% of the respondents reported turning to contacting eyewitnesses through social media, trying to identify the source of information, cross-checking social media information using Google search engine, or cross-checking if other credible news organizations have used the same information as their strategy to verify the information. More than 85% of the journalists reported turning to traditional methods to verify the social media information such as contacting the concerned person through email, phone, or talking face-to-face, or relying on the journalistic common sense about the veracity of information. More than 75% of the journalists reported using digital tools to verify the photos and videos they find on social media. More than

70% percent of journalists reported that they only follow verified accounts or use information

only from the social media sources they know as their strategy to report correct information.

More than 60% of journalists reported that they put a disclaimer on unverified information to let

the audience know that the information could not be verified.

**Table 4. Do you use the following methods to verify the information found on social media platforms? (1 = Strongly disagree; 7 = Strongly agree).**

| Deployed strategy | Agree (%) | Disagree (%) | M | Sd | N |
|---|---|---|---|---|---|
| Accessing eyewitness and authenticating sources | 91.8 | 5.2 | 5.66 | .91 | 134 |
| Using traditional journalistic methods | 88.7 | 9 | 5.25 | .90 | 133 |
| Multimodal verification and verification tools | 78.8 | 13.6 | 5.26 | 1.45 | 132 |
| Using trusted sources | 73.9 | 12.7 | 5.30 | 1.36 | 134 |
| Workaround methods | 64.4 | 16.7 | 4.96 | 1.69 | 132 |

**RQ6a: Is there a relationship between attitude towards social media and use of social**

**media for sourcing?**

A Pearson correlation test was run to check the relationship between attitude towards

social media and use of social media for sourcing. A significant positive correlation was found ($r$

$(116) = .34, p < .001$) between positive attitude towards social media and its use sourcing

purposes. This result means if journalists have positive attitude towards social media, they are

more likely to use it for sourcing purposes or if they do not have a positive attitude towards

social media, they are less likely to use it for sourcing purposes.

**RQ6b: Is there a relationship between attitude towards social media and use of social**

**media for verification?**

To answer this question, a Pearson correlation test was run to check the relationship

between attitude towards social media and use of social media for verification. A significant

positive correlation was found ($r$ $(131) = .47, p < .001$) between positive attitude and verification

from social media. This result indicated that if journalists have positive attitude towards social media, they are more likely to use it for verification purposes, or if journalists do not have a positive attitude towards social media, they are less likely to use it for verification purposes.

**RQ7: Do journalists facing greater workload pressures use social media more for sourcing?**

An independent-samples t-test was calculated to compare means of groups that reported low level of workload pressure (n = 15) and those that reported high level of workload pressure (n = 120). A significant difference ($t$ (115) = -2.223, $p$ = .028) was found between the means of two groups. The mean of respondents facing low level of workload pressures ($M$ = 3.94, $sd$ = .81) was significantly different from respondents facing higher level of workload pressures ($M$ = 4.62, $sd$ = 1.07). This result indicates that journalists who face more workload pressure are more likely to use social media for sourcing as compared to journalists facing low level of workload pressures, or journalists facing low level of workload are less likely to use social media for sourcing as compared to journalists facing higher level of workload pressures.

**RQ8: Do journalists in Pakistan use social media for sourcing that represent information subsidy?**

To measure information subsidy, three statements were indexed which measured the role of social media in increasing efficiency for work, providing easy access to information, and saving time to complete the job (Cronbach Alpha = .651) to create a new variable. The descriptive analysis (n = 145) revealed that 77.2% of the respondents agreed that they use social media for sourcing because it increases their efficiency, provides easy access to information, and saves time to complete the job. This result indicates that use of social media for sourcing serves as an information subsidy for journalists in Pakistan.

**H1: In the breaking-news scenario, journalists will rely more on social media for sourcing.**

To test this hypothesis an independent-samples t-test was calculated to compare means of social media use for sourcing by journalists. Journalists were divided into two groups facing no breaking-news scenario (n = 22) and high breaking-news scenario (n = 71). Those journalists who were neutral toward facing breaking-news scenario or did not respond to question were excluded from analysis. A significant difference was found ($t$ (91) = -2.358, $p$ = .021). The mean of respondents facing no breaking-news scenario ($M$ = 4.17, $sd$ = .95) was significantly different from respondents facing higher breaking-news scenario ($M$ = 4.77, $sd$ = 1.07). The results indicate that in breaking-news scenarios journalists are more likely to use social media for sourcing purposes. The results support the H1.

**H2: Those journalists who rely more on social media for sourcing are more likely to use it for verification purposes.**

To test this hypothesis, a Pearson correlation test was run to check the relationship between social media use for sourcing and using social media for verification purposes. A positive correlation was found ($r$ (127) = .443, $p$ < .001) between use of social media for sourcing and using it for verification purposes. The more journalists use social media sourcing, the more they are likely to use it for verification purposes. H2 is supported by results.

**H3a: Journalists covering the soft news are more likely to use social media for sourcing than the journalists covering the hard news.**

To test this hypothesis, an independent-samples t-test was run to compare the means of journalists covering the hard news; politics, crime, economy (n = 31) and soft news; culture, entertainment, sports, and science (n = 14) for using social media for sourcing purposes. There was no significant difference was found ($t$ (43) = .416, $p$ = .679). The mean of journalists covering hard news ($M$ = 4.41, $sd$ = 1.38) was not significantly different from journalists

covering soft news ($M$ = 4.24, $sd$ = .95) for social media use for sourcing. H3a was not supported. The reason for a small sample for this hypothesis is that 65 out of 149 respondents were reporters. So, hypothesis test accounts for about 40% of the data.

**H3b: Journalists covering the soft news are more likely to use social media for verification than the journalists covering the hard news.**

To test this hypothesis, an independent-samples t-test was run to compare the means of journalists covering the hard news; politics, crime, economy (n = 35) and soft news; culture, entertainment, sports, and science (n = 15) for using social media for verification purposes. There was no significant difference was found ($t$ (48) = .995, $p$ = .325). The mean of journalists covering hard news ($M$ = 3.69, $sd$ = 1.29) was not significantly different from journalists covering soft news ($M$ = 3.32, $sd$ = .99) for social media use for verification. The mean of both the groups is lower than 4, which is the neutral point on the measuring scale, meaning that both groups of journalists covering hard and soft news do not use social media for verification purposes. H3b was not supported. The reason for a small sample for this hypothesis is that 65 out of 149 respondents were reporters. So, hypothesis test accounts for about 40% of the data.

**H4a: The higher the trust of journalists in social media, the higher the use of social media will be for sourcing by journalists.**

To test this hypothesis, a Pearson correlation test was calculated to see the relationship between trust in social media and its use for sourcing. A positive correlation was found ($r$ (117) = .23, $p$ = .012) between trust in social media and its use for sourcing. This result indicates that those journalists putting more trust in social media are more likely to use it for sourcing purposes, and those putting less trust in social media are less likely to use for sourcing purposes. Thus, H4a is supported by the results.

**H4b: The higher the trust of journalists in social media, the higher the use of social media will be for verification by journalists.**

To test this hypothesis, a Pearson correlation test was calculated to see the relationship between trust on social media and its use for verification. A positive correlation was found ($r$ (133) = .31, p <.001) between trust on social media and its use for verification of information. The result indicates that those journalists who put more trust in social media are more likely to use it for verification purposes, and those journalists who put less trust in social media are less likely to use it for verification purposes. Thus, H4b is supported by the results.

**H5a: Journalists who perceive themselves to be more skillful in using social media will use it more for sourcing.**

To test this hypothesis, an independent-samples t-test was run to compare the means of those who reported themselves to be highly skillful in using social media and those who reported themselves as lower or medium in skills for using social media. Skill level was measured using nominal variables, t-test is suitable to see the differences between two groups. The participants were divided into two groups, the first group was those journalists who reported to be highly skilled in using social media (n = 42), second group was those journalists who reported themselves to be low level or medium level skilled (n = 78). For social media sourcing, no significant difference was found ($t$ (118) = -.676, $p$ = .5). The means of journalists who consider themselves highly skilled in using social media ($M$ = 4.45, $sd$ = 1.25) were not significantly different from those who reported to be less skilled ($M$ = 4.59, $sd$ = .97). Thus, H7a is not supported by results.

**H5b: Journalists who perceive themselves to be more skillful in using social media will use it more for verification.**

To test this hypothesis, an independent-samples t-test was run to compare the means of those who reported being highly skilled (n = 48) with those who reported being lower or medium in skills (n = 86). The t-test was suitable because skills level was measured using nominal variables. For verification from social media, no significant difference was found ($t$ (132) = .010, $p$ = .99). The means of journalists who considered themselves highly skilled in using social media ($M$ = 4.04, $sd$ = 1.01) were not significantly different from those who reported to be less skilled ($M$ = 4.04, $sd$ = 1.34). Thus, H7b is not supported.

**H6a: The higher the age of journalists, the less likely they will use social media for sourcing.**

To test this hypothesis, a Pearson correlation test was run to see the relationship between age and use of social media for sourcing. A negative but not significant relationship was found ($r$ (116) = -.029, $p$ = .759) between age and sourcing from social media. Thus, H6a is not supported.

**H6b: The higher the age of journalists, the less likely they will use social media for verification.**

To test this hypothesis, a Pearson correlation test was run to see the relationship between age and verification from social media. A negative but not significant relationship was found ($r$ (130) = -.062, $p$ = .478) between age and verification from social media. Thus, H6b is not supported by results.

**Chapter V: Discussion**

This study aimed at bringing insights into journalistic practices in Pakistan regarding use of social media for sourcing and verification purposes. As many scholarly works have indicated the adoption of social media in news production process and its use for information gathering (e.g., Heravi & Harrower, 2016; Johnston et al., 2019; Larsen, 2017; Lecheler & Kruikemeier, 2016; Lysak et al., 2012; Weaver & Willnat, 2016), this study attempted to investigate the journalistic practices in a changing news ecosystem in a non-Western context. There is a lack of studies in non-Western countries regarding the use of social media for sourcing and verification purposes. This study will add to media sociology literature from a non-Western context.

Overall journalists in Pakistan have shown a heavy reliance on social media for sourcing purposes and use several social network sites to gather information and follow sources. A greater reliance on social media for sourcing can result in shifting power from gatekeepers to sources because this increase in reliance for sourcing can increase the role of sources in agenda setting. Shoemaker and Reese (2014) described the effects of extra-media factors on news, and in the case of social media it can have an effect in two forms. First, a greater reliance on social media for sourcing will affect the agenda setting because journalists might choose what to include based on the prevalent information on social media, and sources they follow on social media. Second, by taking information from social media, journalists do not have the means to negotiate with the sources. In other words, journalists do not have the power to ask questions, argue, or cross-check information which they have in traditional ways of newsgathering such as a press conference. Journalists will be more on receiving end. Information available on social media platforms and sources on these social networking sites may affect the agenda setting, as

Parmelee (2014) found effects of politician's tweets and their subsequent effect on selection of sources for interviews by journalists.

Inclusion of social media in daily routines can affect the journalistic practices, the choices journalists make, the content they produce, defining what is newsworthy and what it not, and prioritization of an item (Cottle & Ashton, 1999; Shoemaker & Reese, 2014; Shoemaker & Vos, 2009; Tuchman, 1977; Tuchman, 1978). Shoemaker and Vos (2009) wrote how use of technology can affect the gatekeeping process, and with more use of social media for sourcing, more information obtained from social media will pass through the gates.

More than 80% of the respondents reported using Twitter for sourcing, and more than 60% reported using Facebook for sourcing, but having said that, journalists do not solely rely on social media sources and tend to add other sources to corroborate what they find on social media to complete their stories. More than 75% of the respondents reported that they do not use social media as the only source for their news stories and they tend to include other sources as well. This is an indication that social media is being adopted by journalists for sourcing, but it is not displacing other methods of sourcing. Previous studies have found similar results where social media is being integrated into news production processes, but journalists still gravitate towards traditional routines and official sources, meaning this adoption is still in transitional phase (e.g., Heravi & Harrower, 2016; Lecheler & Kruikemeier, 2016; Moon & Hadley, 2014; Zhang & Li, 2020).

By using Hierarchy of Influences, this study attempted to highlight the most influential factors in use of popular social media platforms for sourcing purposes. From the four regression models, it was interesting to note how different concepts from the Hierarchy of Influence model affect the use of different social media platforms. Routines become the only significant predictor

from Hierarchy of Influences for use of Twitter for sourcing purposes. This indicates that journalists use Twitter in their daily routines and rely on it for newsgathering and other sourcing purposes. It seems that journalists find valuable and newsworthy information on Twitter, and they use it in their favor to complete their job. As many sources, such as politicians, use Twitter for posting information, journalists have adopted the use of Twitter in their daily news activities. Twitter seemed to be routinized by Pakistani journalists and routines for other popular social media platforms did not become significant.

For Facebook, policy and reward at organizational level and skills at individual level were significant predictors for its use for sourcing purposes. For Instagram, policy and reward were significant predictors for its use for sourcing. It suggests that those journalists working with organizations that have a policy or set of guidelines for using social media and encouraged their employees and rewarded them tend to consult Facebook and Instagram more for sourcing. This indicates an organizational influence on journalists where organizational policies and actions of the supervisors affected the choices and routines of journalists regarding social media use for sourcing. For Facebook, skills in using social media was a factor at individual level of influences which predicted its use for sourcing purposes. Other than the skills, no other variable at individual level was significant for any of the popular social media platforms. The results about skill level are similar to what previous studies have found (e.g., Heravi & Harrower, 2016).

In television and online news environment journalists are constantly under workload pressures which resulted in increased use of social media for sourcing purposes by Pakistani journalists because these platforms provide an easy access to information with less cost (Shoemaker & Reese, 2014). Breaking-news scenarios are similar conditions when journalists

face added workload pressure. Those journalists facing more breaking news reported using more social media for sourcing than those who face less breaking-news.

Gandy (1982) suggested that journalists may tend to use conveniently available information due to time pressures and deadlines. The results have indicated that journalists in Pakistan are using social media as an information subsidy because it provides a convenient way of information gathering, requires no extra resource allocation, and make it more economically viable (Gandy, 1982). At the core of the concept of information subsidy is the purpose to influence the actions of others (Gandy, 1982), the use of social media as information subsidy by Pakistani journalists can result in significant shift of power from journalists to the sources in shaping the news (e.g., Heim, 2021). Shoemaker and Vos (2009) described the relationship between gatekeeper and sources as mutually beneficial. In the case of using media for sourcing, gatekeepers are at the receiving end which creates an imbalance between this mutually beneficial relationship. Sources make access to information easy by posting on social media platforms and journalists and media organizations get into a race who will broadcast it first. By doing this, the originator of information gets media space and easily avoids accountability. This puts sources in more control of agenda setting which can compromise professional journalistic standards. The results have indicated that journalists heavily rely on social media for sourcing in their daily routines and they also do it to save cost, time, and to increase the efficiency in performing their job. Journalists are using information provided on social media as a subsidy and this practice has become a routine. Chibnall (1997), and Shoemaker and Vos (2009) argued about how the news is already shaped passing through different gates before it reaches the gatekeepers. A greater reliance on social media for sourcing will result in more frequent influence on the content. The more journalists rely on information subsidies available on social media, the more control

sources will wield in building the media agenda. There are several factors identified by scholars such as role of workload, time constraints, and cost which can push journalists to rely on convenient ways of information gathering (Bane, 2019; Heim, 2021; Larsen, 2017; Moon & Hadley, 2014; Zhang & Li, 2020). Information available on social media makes it an attractive place where journalists may tend to attend it and subsequently use it in their news to ease the workload, complete a story quickly, and make information gathering less costly. This study suggests a theoretical connection between Hierarchy of Influences model and information subsidy. But there is a downside of this approach of using social media as an information subsidy in daily routines, and that is losing control of the role of agenda setters. Journalists in Pakistan may have routinized the use of social media as an information subsidy unknowingly, but this can result in losing control over agenda-setting.

A comparison was made between types of news journalists cover and social media use for sourcing and verification. There was no difference found in the use of social media for sourcing and verification purposes between journalists covering soft news and hard news. This result was contrary to what previous research has found (e.g., Heravi & Harrower, 2016; Lecheler & Kruikemeier, 2016). A reason for this contradiction can be a lack of a clear demarcation between job assignments and journalists might be covering some news outside of their primary beats.

This study also investigated if journalists use social media for verifying information. More than 70% reported using Twitter for verification purposes which is considerably higher use as compared to other social media platforms. More than 40% of the respondents use Facebook and YouTube for verification purposes. Twitter stands out in social media platforms where journalists go to cross-check and verify the information they have. The findings for using

Facebook, YouTube, and Instagram for verification are similar to previous studies (e.g., Heravi & Harrower, 2016, Zhang & Li, 2020), but results about Twitter are different. Almost three quarters of the respondents reported using Twitter for verification purposes. Heavy reliance on Twitter for verification can displace the traditional methods of verification. Journalists' lack of skills to cope with challenge of fake news on online platforms can also have implications for journalism. The presence of verified accounts cannot guarantee the accuracy of information.

Overall journalists use social media for sourcing, and it becomes important to know how journalists verify the information found online. Journalists in Pakistan used all five categories developed by Brandtzaeg et al. (2016) for verifying online information. Journalists reported following the trusted sources, resorting to accessing eyewitnesses and authenticating sources, using traditional journalistic methods for verify information, using technological tools, and using workaround methods. Journalists in Pakistan verify social media information remaining within the social media networks by trying to access eyewitnesses and authenticating sources of information and by going outside the social media by using traditional journalistic approaches and other digital tools available for verifying the online content. This result is similar to what Heravi and Harrower (2016), and Zhang and Li (2020) found in their studies. The findings about following trusted sources on social media to get authentic information are also similar to what previous studies have found (e.g., Heim, 2021; Paulussen & Harder, 2014).

The attitude of journalists also played a key role in adoption of social media for sourcing and verification purposes. Those journalists having a positive attitude towards social media tend to use it more for sourcing and verification purposes. This result was similar to what other researchers have found (e.g., Weaver & Willnat, 2016). In addition, those journalists who use social media for sourcing use it more for verification purposes as well (e.g., Zhang & Li, 2020).

Trust also played a key role in adoption of social media for sourcing and verification where journalists putting more trust on social media tend to use it more for sourcing and verification (e.g., Zhang & Li, 2020). For verification purposes, most of the journalists reported relying on Twitter and its use was considerably higher than other social media platforms.

There are limitations to this study which can be helpful for the future investigation of journalistic practices in Pakistan. This study applied four levels of Hierarchy of Influences model; a future study can investigate social system as a factor influencing use of social media for sourcing. A purposive sampling was used after the refusal from news organizations to share the data of their employees due to organizational policies. A random sampling could have less sampling error and results could be more generalizable to the population. Previous scholarship using Hierarchy of Influences did not provide measures to test it for social media sourcing, the author developed new measures and reliability of some of the measures was low. But these measures can help future studies to investigate social media sourcing in different contexts.

The list of social media platforms provided in the survey was not exhaustive. As many of the respondents reported using other social media platforms, a future study can be conducted to know what the other social media platforms journalists are using for sourcing and verification purposes. From the measure of verification strategies, one indicator related to the category of trusted sources was removed due to language error. The sample in this study mainly included journalists working for television news channel, whereas in future studies, a sample could be drawn from newspapers and their online news website which can enable a comparison between the media type and use of social media for sourcing and verification. For more future studies, a different methodology can be adopted, for example, conducting in-depth interviews with

reporters and newsroom staff to get more insights into their use of social media for sourcing and

verification practices.

**Chapter VI: Conclusion**

This study has contributed to the knowledge about the impact of social media on journalistic practices with regard to sourcing and verification in a non-Western context. The study shows that journalists have adopted social media platforms for sourcing purposes with Twitter being consulted the most for information gathering and verification. It also added knowledge to the media sociology theory by investigating the best predictors for use of social media for sourcing using the Hierarchy of Influences model. Routines were best predictors for use of Twitter for sourcing, organizational policy and reward, and skills were best predictors for use of Facebook for sourcing, and organizational policy and reward were best predictors for use of Instagram for sourcing. This means that sourcing from different social media platforms is affected by different levels of Hierarchy of Influences. In other words, a concept influencing Twitter use for sourcing may not affect Facebook use for sourcing and vice versa.

It is noteworthy that social media is integrated into journalistic practices for sourcing and verification but not completely replacing the traditional methods. Journalists rely on social media to increase their access to sources, but they do not solely rely on social media. Journalists tend to corroborate information obtained from social media platforms with references obtained through traditional methods, signifying the complimentary nature of social media use. For journalists, social media serve as an extension to traditional methods, and they use it to increase their access to sources and to get help in verifying information. Twitter stands out in all the social media platforms and most of the journalists reported using it for sourcing and verification purposes. Journalists tend to remain within social media and go out of social networking sites to verify information they find online. Attitudes towards social media and trust play a key role in its increased use for sourcing and verification.

The workload pressures and breaking-news scenarios also contribute to the increased use of social media for sourcing. This gives more credence to the use of social media as an information subsidy where journalists get easy access to information which saves time and cost. This can have a significant effect on journalistic practices where journalists facing workload pressures might not get enough time to further investigate the authenticity of the information and verify it from other real-world sources, consequently, ending up relying on social media for gathering facts. This effect can exacerbate in the long run because more reliance on social media for sourcing has a positive correlation with its use for verification.

Hermida (2013) noted the effects hybridity of old and new approaches on journalistic norms. The reliance on social media for sourcing and verification can pose multiple challenges for journalists. Sources are important for journalists for construction of social reality, but more reliance on social media sourcing can shift the power of agenda setting from journalists towards sources. On social media, sources would be able to set the agenda without even encountering the press. More reliance on social media for sourcing and verification means more frequent influence on the content journalists produce. The relationship between journalists and their sources will become more vertical rather than horizontal or mutually beneficial limiting the negotiation between both to construct the social reality. Though journalists use social media as an extension to traditional methods for sourcing and verification, in the presence of fake news in an online environment journalist needs to be cautious about the value and reliability of online information. In addition, journalists need to consider the effects of their "following" behavior on the content they produce and the sources they use in their reporting.

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**Appendix**

**Survey instrument used to measure responses from Pakistani journalists.**

Q1: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

I use Twitter for news sourcing.

I use Facebook for news sourcing.

I use YouTube for news sourcing.

I use Instagram for news sourcing.

I use other social media platforms for news sourcing.

Q2: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

I use Twitter as the only source in news.

I use Facebook as the only source in news.

I use YouTube as the only source in news.

I use Instagram as the only source in news.

I use social media platforms as the only source in news.

Q3: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

Social media help me to complete my job efficiently.

Social media help me to complete my job effectively.

I am dependent on social media for my journalism.

I find it hard to complete my story without getting information from social media.

Social media add value to my journalism.

Social media help in adding background information to the news.

I use social media for verification of information.

Social media help in reporting accurate information.

Social media skills increase my professional worth.

Social media skills increase my value as journalist.

Social media help in identifying important events.

Social media help in identifying stories that public are interested in.

Social media help in identifying stories that need urgent attention.

Social media help in identifying stories which are more related to audiences.

Social media provide me an easy access to information.

Using social media for news help me complete my job in less time.

Social media help me break news before competitor news organizations.

Journalists in my organization have become too reliant on social media for their work.

Social media often have inaccurate information.

Social media have contributed to factual errors in my news.

Q4: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

My organization has a policy that guides me on how to use social media in my journalism.

My organization encourages the use of social media in my journalism.

My organization has rules which restrict the use of social media.

My organization rewards journalists who use social media to improve their journalism.

My organization has designated people whose primary job is to monitor social media for newsgathering.

My supervisors discourage the use of social media for journalism.

I have freedom to use social media for my journalism the way I see fit.

Social media have decreased the cost of newsgathering for my organizations.

The economic crisis in the media industry has caused an increase in social media use for journalism.

My organization relies on social media more for international news than local news.

Q5: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

I find my primary sources more easily on social media as compared to other methods.

I find official sources more easily on social media as compared to other methods.

Social media help me identifying important sources for my journalism.

Social media expand my network of sources.

My primary sources prefer I contact them through social media more than other channels.

My primary sources prefer to use social media to respond to my interview questions.

I find information from official sources available on social media authentic.

I find information from official sources available on social media correct.

Social media has increased the visibility of official sources in journalism.

Social media has increased the visibility of the country's institutional sources in journalism.

Official sources on social media help in providing background information for my journalism.

The country's institutional sources on social media help in providing background information for my journalism.

I use the information from official sources available on social media as it is.

Information provided by the country's institutions on social media does not require changes before including it in my journalism.

I do not cross-check information obtained from social media platforms of official sources.

I use social media in my journalism because competitor media organizations use them.

If another media organization breaks some news, I use social media to find that news.

I use social media to keep an eye on other media organizations.

The competition in the media market has increased the use of social media for journalism.

Social media has become a need for news organizations.

By not using social media, I might miss out on important news.

Social media is necessary to remain in competition.

Not using social media can result in losing the audience.

Q6: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

I use Twitter for verification of information.

I use Facebook for verification of information.

I use YouTube for verification of information.

I use Instagram for verification of information.

I use other than above mentioned social media platforms for verification of information.

Q7: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

I cross-check social media content from national and international news agencies and other trusted news outlets.

I only use information from social media sources I know.

I only use information from verified accounts on social media.

I try to contact the eyewitnesses of an event from social media.

I cross-check social media content using Google search.

I look at social media accounts and try to identify the source of information.

I check other credible news organizations to see if they have reported the same information which I found on social media.

I cross-check social media content from the concerned persons by calling them by phone.

I cross-check social media information from the concerned persons in face-to-face interaction.

I cross-check social media information by emailing the concerned persons.

I rely on journalistic common sense to evaluate the truthfulness of social media content.

I use digital tools for verification of photos on social media.

I use digital tools for verification of videos on social media.

I put a disclaimer on unverified information when I include it in my news.

Q8: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

Social media have a positive impact on my work.

I consider social media credible for journalistic purposes.

I trust social media to use in my journalism.

Social media have an overall positive impact on journalism.

Q9: Rate your level of agreement from strongly disagree (1) to Strongly agree (7) for the following statement.

I often face breaking-news scenarios.

I often feel pressure from the workload.

I meet multiple deadlines every day.

I work on multiple stories at the same time.

Q10: Which organization you work for?

Q11: What is the media type you primarily work for?

Q12: What is your role in the organization?

Q13: If you are a reporter, what beat do you cover?

Q14: State the number of years of your journalism experience.

Q15: How would you rate yourself in skills for using social media?

Q16: What is your gender?

Q17: What is your age?

Q18: What is your highest education level?

Q19: Is your highest level of education in journalism?