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Achoo! Three major US newspapers reporting on the flu before and after H1N1

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Achoo! Three Major US Newspapers Reporting on the Flu Before and After H1N1

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JAMES MADISON UNIVERSITY

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Dedication

To God – I can do all things through Christ which strengtheneth me.

To Marissa my sweet wife and eternal companion, without her love, support and countless sacrifices this would have never been possible.

To Robert “Connor” Harris my first son, for always smiling even in the hard moments.

To Baby, Rebecca Grace Harris my first daughter, joy truly follows adversity.

To my parents, Alan and Verleen Harris, for your unconditional love and constant encouragement.

To my siblings, Clarissa, Scott and Adam, for their never ending patience, understanding and love.

To friends and extended family near and far for constant support and reassurance.

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Abstract

The flu is the most common and also the most preventable health risk and crisis in the United States. This research is a quantitative content analysis of flu coverage appearing in 102 articles from *The Washington Post*, *USA Today*, and *The New York Times*. It examines the differences in the coverage three years before and after the H1N1 pandemic and evaluates them for the use of fundamental constructs in health, risk, and crisis communication theories such as severity, susceptibility, efficacy, excuse, justification, intention, expertise, and trustworthiness. Most significant differences were found between excuse and justification as well as with severity in comparison to susceptibility and efficacy. Further research could be conducted to see how using these constructs in newspaper reporting impacts individual behaviors for common disease prevention.

Key words: Content Analysis, flu, Situational Crisis Communication, Extended Parallel Process Model, Crisis Emergency Risk Communication, quantitative

“There are, it may be, so many kinds of voices in the world, and none of them is without signification. Therefore if I know not the meaning of the voice, I shall be unto him that speaketh a barbarian, and he that speaketh [shall be] a barbarian unto me.” (1 Corinthians 14:10-11, King James Version).

Chapter One: Introduction

Risks and crises, in particular those related to everyday health, are a major part of reported news in America (Tulloch & Zinn, 2011). Pandemic influenza, or flu, has successfully maintained public attention in the media for the last quarter century (Molinari et al., 2007; Seeger, Reynolds, & Sellnow, 2010a). As a result, flu is one of the most heavily reported and monetarily significant risks and is a crisis of this time period (Molinari et al., 2007). In seeking the best way to communicate about the flu, definitions of risk and crisis communication for evaluation and understanding messages are presented as well as an overview of the flu.

Risk communication is defined by Covello (1992) as the trading of information between equally invested parties about the condition, extent, implication, or regulation of a risk. McComas (2006) later emphasized this was the practice of risk management. In addition, Palenchar (2005) showed the need for dialogue to exist between the equally invested parties, namely communicators and stakeholders. Lastly, Coombs (2012) added the necessity of ongoing risk monitoring. Therefore, Coombs and Holladay (2010) argue that the inability to control or manage a risk in an efficient manner can lead to a crisis; conversely, a crisis may create an underlying necessity for risk. Intentional crises include terrorism, sabotage, workplace violence, poor employee relationships, poor risk management, hostile takeovers, and unethical leadership (Ulmer, Sellnow, & Seeger, 2011). Heath (2006) further clarifies that a crisis is a risk manifested. Examples of unintentional crises include natural disasters, disease outbreaks, unforeseeable technical interactions, product failure, and economic downturn. As evidenced by its evolution, risk

and crisis communication have had multiple contributors to its definition that have only enhanced understanding and practice.

The flu is the most preventable disease in the United States as well as the most common unintentional risk and crisis (CDC, 2015a; Ulmer, Sellnow, & Seeger, 2011). According to the Centers for Disease Control and Prevention (CDC) flu season starts in the United States in the early fall, typically late August or early September, and reaches its peak between the months of December and February and then slows down (CDC, 2015a). In some rare instances, the flu has occurred as late in the year as May (CDC, 2015a). During its peak, the flu generally spreads to a majority of people in a defined geographic area or population, also known as an epidemic. Every other year since 2000 flu activity has reached the level of an epidemic (CDC, 2015a). Sometimes epidemics grow into pandemics, as such a pandemic is an epidemic that both covers larger regions and affects greater numbers of people. Therefore, Kilbourne (2006) concludes that over the last hundred years there has been at least three worldwide flu pandemics.

To decrease widespread flu the CDC, World Health Organization, health departments, physicians and other subject matter experts have shared information through news media, such as the simple steps that individuals can take to prevent the flu each year (Flu.gov, 2015). The single best way to prevent the flu is being vaccinated (Flu.gov, 2015). Other information is targeted at groups who are at high risk for developing consequences of the flu. Among these groups are children younger than five, but especially those children younger than 2 years old, adults 65 years of age and older, pregnant women, and those with chronic medical conditions such as asthma (CDC, 2015a). Because, these groups have more severe consequences when they catch the flu,

health risk messages often are shared to the general population in the context of avoiding close contact with sick people, staying home for a minimum of 24 hours if they have flu-like symptoms, covering noses and mouths when coughing or sneezing, and washing hands with soap and water or use an alcohol based hand rub (CDC, 2015a; Glanz & Yang, 1996). Additionally, still other messages assist in increasing understanding of the risk, as well as calming fears, and influencing future decision making (CDC, 2015a; Glanz & Yang, 1996). However, risk messages such as these may not make great news stories because of a lack of qualities such as sensation, excitement, and/or profit producing (Wright, Sparks & O'Hair, 2008). Once the flu becomes personally relevant, is novel, and/or has an added shock value the media can present it as a crisis to the public. (Cooper, Burgoon, & Roter, 2001).

In 2015, the flu was presented as a crisis through qualities of relevance and shock. This is evidenced in newspaper articles that announced the flu had reached epidemic levels with elevated activity in 45 states (CDC, 2015b) compared to 36 states last year at the same time. As well as sharing the information that as of the week ending on January 31, 2015 hospitalizations occurred at a rate of 43.5 per 100,000 far greater than those in previous years (CDC, 2015b). Between 1976 and 2007 deaths from the flu varied from a low 3,349 in years 1986–87 to a high 48,614 in years 2003–04 with the annual death rate for all ages ranging from 1.4 to 16.7 deaths per 100,000 persons over the same time period (CDC, 2010). Additionally, since 2004 the number of deaths is annually 2.7 times more than the previous year (CDC, 2015b). Aside from death, hospitalizations have also steadily increased each year since 2004 (CDC, 2015b).

In newspapers, as well as other forms of media, the flu is presented mostly in terms of harms, outcomes, and prevention (Kiwanuka-Tondo, Albada & Payton, 2012). Additionally, Trumbo, (2012) argued that a newspaper which reports high levels of positive flu tests from authoritative figures, such as doctors or public health workers, led to smaller numbers of people seeking a physician when they experienced flu-like symptoms. This means that as the number of reported sick people grew more non-sick people were likely to visit a doctor regardless if they showed symptoms. Additionally, non-sick people with symptoms were even more less likely to go to the doctor if they had had symptoms and had not heard about the increasing number of sick people compared with those who had heard about the increasing number of sick and had symptoms.

Journalists choose what information they communicate to the public as well as whom they receive it from (e.g., government officials, subject experts, and/or laypersons). Government officials and subject experts may be using recommended health, risk, and crisis communication strategies and tactics in addressing the flu; however, journalists may not purposefully report these. Jardine and Hrudey (1997) and Frewer (2004) conclude that mixed risk and crisis messages can result in frustration, confusion, and inaction on part of the public. Therefore, this study aims to present the quantity and quality of use of key health, risk, and crisis communication strategies and tactics by authoritative communicators in three national newspapers' coverage of the flu in more recent years.

The following chapter reviews three risk and crisis communication strategies including Crisis Management Process, Situational Crisis Communication Theory and Crisis and Emergency Risk Communication (CMP, SCCT, and CERC). After which it

will address the theoretical foundations of framing theory and the Extended Parallel Process Model (EPPM) with emphasis on key constructs of each. Next, the literature on print reporting health information as well as instances of framing and EPPM in the literature as they pertain to health, health in print, and the topic influenza. It concludes by revisiting the key constructs of each theory and model and presents a rationale to guide this study.

Chapter Two: Literature Review

Risk and crisis communicators have developed approaches such as the Crisis Management Process (CMP), Situational Crisis Communication Theory (SCCT), and Crisis and Emergency Risk Communication (CERC) as ways to manage unanticipated emergencies or infrequent events that may jeopardize public opinion of an organization.

The first of these CMP is composed of three phases, pre-crisis, crisis response, and post-crisis (Coombs, 2009, 2010). According to Coombs (2009, 2010) pre-crisis consists of actions taken by an organization before the crisis occurs, which usually consist of preparation or prevention. Secondly, crisis response occurs when the leading organization(s) tries to take charge and restores everything as it was before (Coombs, 2009, 2010). Crisis literature tends to focus specifically on this stage of crisis but the other stages receive attention as well (Kim, Avery, Lariscy, & Hocke, 2010; Seeger, Sellnow, & Ulmer, 1998, 2001). During the crisis stage the organization is involved in forming a response (Benoit, 1995; Coombs, 2009, 2010). This response is any content that may contain instructing information for the public as well as directions to follow (Coombs, 2009, 2010). The third and final stage is post-crisis. This encompasses what is done after the crisis has occurred as the organization tries to return to a favorable pre-crisis state. To do so organizations communicate with stakeholders including the providing of progress updates, actions to prevent a similar future crisis, reports, and other promised information (Coombs, 2009, 2010). Depending on crisis, type and level of responsibility, the agency has specific actions to take they may also engage in image restoration strategies (Benoit, 1995).

CMP therefore indicates both the stages and process a crisis goes through from start to finish as well as summarizes basic actions taken to address the crisis. SCCT helps

to predict the appropriate response strategies during each stage of a crisis. Deny, diminish, rebuild, and bolster, are the four main crisis response strategies, see Table 1 (Coombs, 1995, 2009).

Table 1 SCCT Crisis Response Strategies by Posture

Adapted from Coombs, 1995, 2009

Deny Posture

Attack the accuser: Crisis manager confronts the person or group claiming something is wrong with the organization. "The organization threatened to sue the people who claim a crisis occurred."

Denial: Crisis manager asserts that there is no crisis. "The organization said that no crisis event has occurred."

Scapegoat: Crisis manager blames some person or group outside of the organization for the crisis. "The organization blamed the supplier for the crisis."

Diminish Posture

Excuse: Crisis manager minimizes the organizational responsibility by denying the intent to do harm and/or inability to control the events that triggered the crisis. "The organization said it did not intend for the crisis to occur and that accidents happen as part of the operation in any organization."

Justification: Crisis manager minimizes the perceived damage caused by the crisis. "The organization said the damage and injuries from the crisis were very minor."

SCCT also draws on Benoit's (1995) image restoration theory in its conceptualization of responsibility and reputation. Additionally, the SCCT theory identifies crisis type (victim, accidental, or intentional) to predict which strategy should be used (Coombs, 1995, 2009; Coombs & Holladay, 2002). When assessing actions during the crisis the organizational historical reputation is considered, and there are nine crisis response recommendations. See Table 2 for the different response recommendations to use during a crisis (Coombs, 1995, 2009).

Table 2 Crisis Response Recommendations for SCCT

Adapted from Coombs, 1995, 2009

-
1. All victims or potential victims should receive instructing information.
 2. All victims should be provided adjusting information including an expression of sympathy.

3. For crises with minimal attributions of crisis responsibility and no history of crises or negative prior reputation, instructing and adjusting information is sufficient.
 4. For crises with minimal attributions of crisis responsibility and a history of crises or negative prior reputation, add diminish strategies to the instructing and adjusting information.
 5. For crises with weak attributions of crisis responsibility, and no history of crises or a negative prior reputation, add diminish strategies to the instructing and adjusting information.
 6. For crises with weak attributions of crisis responsibility, and a history of crises or a negative prior reputation, add rebuild strategies to the instructing and adjusting information.
 7. For crises with strong attributions of crisis responsibility, and a history of crises or a negative prior reputation, add rebuild strategies to the instructing and adjusting information.
 8. Reinforcing strategies can be used to supplement any response.
 9. Deny response strategies are best used only for rumor and challenge crises.
 10. Attempt to maintain consistency between post-crisis response strategies by not mixing deny strategies with either rebuild or diminish strategies.
-

Lastly, Reynolds and Seeger (2005) introduce CERC. This framework has been created using a grounded theory approach (Veil, Reynolds, Seeger & Sellnow, 2008) and therefore, encompasses best practice ideas from other research theories and models. As an overarching framework, it focuses specifically, on the communication functions a public health organization needs to take at various points of a disease risk and crisis cycle. In contrast to CMP, CERC focuses on five stages to provide a more best-practice oriented approach to effective communication. This approach acknowledges that effective communication regardless of the crisis starts well before the event occurs and does not stop until after the immediate threat has subsided and thus there are strategies and tactics that have evolved from the recommendations presented by the SCCT to specifically address health based crises. Table 3 contains a more detailed outline of the working model of CERC.

Table 3 A Working Model of CERC

Adapted from Reynolds and Seeger, 2005

I. Precrisis (Risk Messages: Warnings; Preparations)

Communication and education campaigns targeted to both the public and the response community to facilitate:

- Monitoring and recognition of emerging risks
- General public understanding of risk
- Public preparation for the possibility of an adverse event
- Changes in behavior to reduce the likelihood of harm (self-efficacy)
- Specific warning messages regarding some eminent threat
- Alliances and cooperation with agencies, organizations, and groups
- Development of consensual recommendations by experts and first responders
- Message development and testing for subsequent stages

II. Initial Event (Uncertainty Reduction; Self-efficacy; Reassurance)

Rapid communication to the general public and to the affected groups seeking to establish:

- Empathy, reassurance and reduction in emotional turmoil
- Designated crisis/agency spokespersons and formal channels and methods of communication
- General and broad-based understanding of the crisis circumstances, consequences, and anticipated outcomes based on available information
- Reduction of crisis-related uncertainty
- Specific understanding of emergency management and medical community responses
- Understanding of self-efficacy and personal response activities (how/where to get more information)

III. Maintenance (Ongoing Uncertainty Reduction; Self-efficacy; Reassurance)

Communication to the general public and to affected groups seeking to facilitate:

- More accurate public understandings of ongoing risks
- Understanding of background factors and issues
- Broad-based support and cooperation with response and recovery efforts
- Feedback from affected publics and correction of any misunderstandings/rumors
- Ongoing explanation and reiteration of self-efficacy and personal response activities (how/where to get more information) begun in Stage II.
- Informed decision making by the public based on understanding of risks/benefits

IV. Resolution (Updates Regarding Resolution; Discussions about Cause and New Risks/New Understandings of Risk)

Public communication and campaigns directed toward the general public and affected group seeking to:

- Inform and persuade about ongoing clean-up, remediation, recovery, and rebuilding efforts
- Facilitate broad-based, honest, and open discussion and resolution of issues regarding cause, blame, responsibility, and adequacy of response
- Improve/create public understanding of new risks and new understandings of risk as well as new risk avoidance behaviors and response procedures
- Promote the activities and capabilities of agencies and organizations to reinforce positive corporate identity and image

V. Evaluation (Discussions of Adequacy of Response; Consensus About Lessons and New Understandings of Risks)

Communication directed toward agencies and the response community to:

- Evaluate and assess responses, including communication effectiveness
 - Document, formalize, and communicate lessons learned
 - Determine specific actions to improve crisis communication and crisis response capability
 - Create linkages to precrisis activities (Stage I)
-

Crisis communicators have used CMP, SCCT, and CERC to study different sizes and types of crises (Avery et al., 2010; Seeger, 2006; Seon-Kyoung & I-Huei, 2012; Sisco, Collins & Zoch, 2010). Therefore, through these studies CMP indicates the stages or process of a crisis; SCCT helps predict the appropriate response strategies; and CERC gives the tactics needed to complete the strategies and to address a health risk or crisis (Jardine & Hardey, 1997). Additionally, there are two more theories to discuss along which accompany those already discussed because of the relevance they add in regards to understanding of the stages, strategies, and tactics used in studying news coverage; besides the fact that there is no one size fits all solution to examine risk and crisis communication in newspapers.

Framing

Framing theory is a common and familiar choice for crisis communicators studying news coverage (Neuwirth, 2010; Tulloch & Zinn, 2011). Different levels of psychological approaches form the foundation of framing (Borah, 2011; Chong & Druckman, 2007; Tewksbury & Scheufele, 2009). Nevertheless, framing theory more importantly originally focused on public opinion of political campaigns and is grounded in mass media effects studies (Chong & Druckman, 2007; Scheufele, 1999). Framing answers the question of how the news media "set the frame in which citizens discuss public events" (Tuchman, p. ix, 1978). Goffman (1974) presented framing as the concept of the media's role in telling people the way to think about an issue. In the context of flu,

it means the way a newspaper could take important flu information and tell the public the way they should think about the flu thereby influencing public discourse and opinion on the flu.

Furthermore, Goffman (1974) identifies two types of frames, natural and social, which differ based on function. The natural frame comes from taking newsworthy items exactly as they appear and presenting them (Goffman, 1974). However, in contrast the social frame views newsworthy items as driven by outside influences such as other current events or political agendas (Goffman, 1974). Dictated social frames tell what is going on in the world, as well as what has happened previously, by highlighting current and important events (Goffman, 1974). Furthermore, Goffman (1974) explains that the use of either natural or social frames, or any others, as a primary framework, allow for information to vary in level of organization. However, whatever the level of organization, it is possible to find an innumerable amount of ways that it can occur within its defined terms.

Therefore, framing theory allows for the careful extension of research to focus on the crux of an issue instead of just on a broader topic or subject (Tankard Jr, 2003). A newspaper does this as it keys, rekeys, or, in other words, creates frames. Thereby in placing, a newer frame up for interpretation it allows for more widespread application and interpretation of all frames (Goffman, 1974). Borah (2011) supports this by saying, that the literature using framing is both large and growing. Furthermore, this has left framing theory open for application across all communication research traditions thereby ensuring an interdisciplinary-based application.

As mentioned previously, framing is a diverse and useful concept that can vary. Moreover, it requires further explication as its application is across a wide spectrum of educational and professional disciplines (Hallahan, 1999). The practice of framing may be defined as a process of taking some aspect of a communicator's reality and transforming it into salient pieces of communication that can be used to highlight problem definitions, causal interpretations, moral evaluations, and/or promote remedies (de Vreese, 2005; Entman, 1993, Tankard Jr., 2003, Tewksbury & Scheufele, 2009; Pan & Kosicki, 1993). Items that help guide public opinion and attitude toward particular issues, such as the flu, are the salient pieces of communication, or frames that have greater value (Chong & Druckman, 2007). Therefore, Tankard (2013), defined a frame as "a central organizing idea for news content that supplies a context and suggests what the issue is through the use of selections, emphasis, exclusion and elaboration" through categories, qualities, and models (p. 100).

The four structural categories of frames are syntactical structure, script structure, thematic structure, and rhetorical structure (Zhongdang & Kosicki, 1993). Syntactical structures are the arrangement of patterns such as words and phrases into sentences (Zhongdang & Kosicki, 1993). Next, script structure goes a step farther and introduces the describing of events, usually through story, that connect the audience with the topic beyond the limitations of sensory experience (Bird & Dardenne, 1988). Iyengar, (1991) referred to this as episodic framing. Third, thematic structure focuses on one topic while reporting on several statements, actions, or events related to the topic (Zhongdang & Kosicki, 1993). Lastly, rhetorical structure, describes the choices journalists make in relation to their style and the effects they wish to have. In addition, Fairhurst and Sarr's

(1996) identified other qualities of frames such as metaphor, slogan, and artifacts. Lastly, Hallahan (1999) identified seven models of framing— situations, attributes, choices, actions, issues, responsibility, and news (see Table 4) – while mutually, exclusive frames may also combine with other mentioned structures to strengthen understanding and knowledge of frames.

Table 4 Typology of Seven Models of Framing Applicable to Public Relations

Adapted from Hallahan, 1999

<i>What is Framed</i>	<i>Description</i>
Situations	Relationships between individuals in situations found in everyday living and literature. Framing of situations provides structure for examining communication. Applies to discourse analysis, negotiation, and other interactions.
Attributes	Characteristics of objects and people are accentuated, whereas others are ignored, thus biasing processing of information in terms of focal attributes.
Choices	Posing alternative decisions in either negative (loss) or positive (gain) terms can bias choices in situations involving uncertainty. Prospect theory suggests people will take greater risks to avoid losses than to obtain gains.
Actions	In persuasive contexts, the probability that a person will act to attain a desired goal is influenced by whether alternatives are stated in positive or negative terms.
Issues	Social problems and disputes can be explained in alternative terms by different parties who vie for their preferred definition of a problem or situation to prevail.
Responsibility	Individuals tend to attribute cause of events to either internal or external factors, based on levels of stability and control. People portray their role in events consistent with their self-image in ways that maximize benefits and minimized culpability. People attribute causes to personal actions rather than systemic problems in society.
News	Media reports use familiar, culturally resonating themes to relay information about events. Sources vie for their preferred framing to be featured through frame enterprise and frame sponsorship.

The implications of Zhongdang and Kosicki's (1993) structures and Fairhurst and Sarr's (1996) describe techniques to create newsworthy issues. Newsworthy issues follow the careful framing used by Hallahan (1999). Kwansah-Aidoo (2005) showed most newsworthy issues could become subject to the creators values as well as having restrictions imposed by outside individuals. De Vreese (2005) says that audiences are generally educated and form this basis media should frame messages. The uses of framing are hands on, purposeful for the researcher, and useful in getting audiences to think about a topic while shaping how they think about it (Goffman, 1974).

For example, a newspaper company may frame informational flu messages around a situation like lost productivity and then use attributes, choices, actions, artifacts, and responsibility to offer recommendations on what do if one has the flu. For comparison, a local health department may frame the flu around its symptoms using attributes of situation and artifact while also stating who is at risk by using issues and responsibility. It is also through the contribution of framing theory that practitioners have a method through which they can fine-tune messages to effectively address specific audiences through intentional and appropriate mediums (Tewksbury & Scheufele, 2009). Though useful in the construction of messages, framing does not predict how messages are processed.

EPPM

The Extended Parallel Process Model (EPPM) assists in risk and crisis communication because of its ability to predict how individuals will respond when encountering messages that contain different emotions principally fear (Witte, 1994). EPPM falls into multiple communication research traditions (Craig & Mueller, 2007).

EPPM is useful as a model for understanding how people process fear appeals and determine the individual communications success or failure (Craig & Mueller, 2007; Witte, 1992, 1994). Craig and Mueller (2007) would contend that EPPM would most align with either the semiotic tradition because words and symbols are arbitrary and have interpreted meanings. Like framing theory, it belongs in the socio-cultural communication research tradition because of the understanding that the generated effects of communication may create, maintain, repair, or transform an individual reality (Craig & Mueller, 2007; Entman, 1993; Pan & Kosicki, 1993).

EPPM originates from earlier research in both history and mass media effects studies. Additionally, it focuses on effects in the context of health risk messages (Gore, 2005; Popova, 2012; Witte, 1992, 1994; Witte, Meyer, & Martell, 2001). Leventhal's (1970) danger control/fear control framework is the basis for EPPM. Nevertheless, EPPM also extends other theoretical approaches of fear appeal (Leventhal, 1970; Witte, 1994). With the unlimited theoretical scope of EPPM, it spread across communication research traditions and is highly interdisciplinary (Maloney, Lapinski, & Witte, 2011).

The ability to predict an individual's outcome (protection or defensive motivation) to a behavior is EPPM's primary objective. There are four main parts or inputs of EPPM. First, self-efficacy, classified as the ability for the individual to feel that they are able to perform the tasks needed to control the risk. In other words, is the individual able to do what is being asked in order to protect themselves from the flu, (McMahan, Witte & Meyer, 1998; Witte, 1992, 1994; Witte, Meyer, & Martell, 2001). Second, response efficacy is the individual's belief that what is being recommended will work. For example, response efficacy is if the individual trusts enough that getting the flu shot and

washing their hands will be enough to keep them from getting the flu (McMahan et al., 1998; Witte, 1992, 1994; Witte et al., 2001). Third is susceptibility, which is the idea the public has of how likely they are to have the threat impact them. Another way of looking at it is the public's view of how likely the flu is to affect them based on their self-appraisal (McMahan et al., 1998; Witte, 1992, 1994; Witte et al., 2001). Lastly, severity is the view that the public has in regards to how big a threat is (McMahan et al., 1998; Witte, 1992, 1994; Witte et al., 2001). For example, severity is low if the public does not think that only ten people have gone to the hospital with the flu. However, if a business has to close because of the number of employees who have the flu severity may be high. The components of primary and secondary message appraisals are argued for by So (2013) but will not be considered in this study, because interest lies in content of messages not the response to them. The focus of this study in regards to the EPPM lies on the three inputs self-efficacy, susceptibility, and severity.

The EPPM predicts three possible outputs. First, danger control occurs when the aforementioned publics see severity and susceptibility as high and believes that they can take individual action to control the danger or risk (McMahan et al., 1998; Witte, 1992, 1994; Witte et al., 2001). Second, conversely fear control is the outcome when the public believes they have low control to act appropriately to the risk (McMahan et al., 1998; Witte, 1992, 1994; Witte et al., 2001). This may occur even if the severity and susceptibility is perceived as high, as a result they are then likely to take steps to control their fear instead and results in fear control mechanisms and communication responses such as 'It will happen eventually' in order to manage their fears. The final output is no response. The outcome of no response can be defined as when severity or susceptibility

of the risk has been perceived as low. External factors that manifest through the receiver as well as the perception of information are the basis for each outcome of EPPM.

Collectively this allows the outcome, to be the interpretation of the response to the risk or crisis message, which dictates success or failure (Witte, 1994).

Both framing theory and EPPM aim to present and explain audiences' understanding with the use of messages, primarily those communicated through a mass media source such as a newspaper (Reese, 2007). EPPM focuses more on the ability to predict behavioral outcomes of an individual or group of individuals from risk messages (McMahan et al., 1998; Witte, 1992, 1994; Witte et al., 2001). Conversely, framing theory centers on drawing attention to the main part of a message and creating the way in which the public should think about the information that was shared (Entman, 1993). Together, both illustrate what the primary focus of a message is for the public as well as the expected public response.

Framing and Health

The analysis of framing in the context of health crises or risks begins with the primary understanding that framing research is an interdisciplinary approach (D'Angelo, 2002; Hertog & McLeod, 2001; Shah, Domke, & Wackman, 1996). Furthermore, a second understanding is that by being able to frame risk and crisis communication, communicators are better equipped to analyze the framing of health crises and risks as they increase prominence in regular news coverage (Tulloch & Zinn, 2011). Specifically related to this research, is the increased number of health related risk and crisis topics examined by framing (Carduccia, Alfani, Sassi, Cincin, & Calamusa, 2011; Manganello & Blake, 2010; Peng & Tang, 2010; Young, Norman, & Humphreys, 2008; O'Keefe &

Nan, 2012). Different risk and crisis frames manifest in closer examination of health, related risk, and crisis framing projects.

A key concept of frames in this context is the combination with other frames and that a frame is not typically isolated (Van Gorp & Vercruyse, 2012). For example, in cancer frames, two frames identified by Hawkins and Linvill (2010) included public health, which implied putting the issue in a larger environmental context and a contributing cause's frame that assessed blame. Stryker, Solkey, and Emmons (2005) and Atkin, Smith, McFeters, and Ferguson (2008) revealed that news coverage in regards to skin and breast cancer, had frames of risks, prevention, and detection. Framing obesity placed it as an individual problem and risk to health (Jeong, Sano Gilmore, Bleakley, & Jordan, 2014; Sandberg, 2007). Because of multiple frames the topics used in media messages are often interpreted with multiple or dual meanings. In other words, the meanings of messages that contain a health and non-health topic, one dominates the other. McGinty Webster, Jarlenski, and Barry (2014) argue that the health topic dominates the non-health topic more and therefore rises as the dominant frame.

As a result Tulloch & Zinn (2011) pointed out that risks are a major part of health news. Chang (2012) identified this in terms of crisis and risk frames in print. The crises frame focuses on potential severity, susceptibility and awareness whereas, the risk frame centers on items involving both internal and external efficacy, such as prevention and detection, and treatment respectively (Chang, 2012). Chang (2012) also reports that different media forms (internet, television, radio, and print) show a more common trend towards a crisis frame than a risk frame. Chang (2012) also saw the use of more alarm (crisis) than coping (risk) frames when specifically related to health topics. Risk or crisis

frames are harder to detect because of pairing with other frames (Chang, 2012). In the case of Van Gorp and Vercruyse (2012) they found risk frames on dementia that also had a counter crisis frame present. Again, the idea that frames rarely stand-alone shows that health news coverage may feature combinations of frames. Examinations of health messages and frames for effects include Leshner and Cheng (2009). These researchers found the framing of appeal influenced both people's attention span as well as memory in antismoking television commercials. Whereas Tausczik, Faasse, Pennebaker, and Petrie (2012) examined public anxiety over health concerns and learned the health information seeking behavior of individuals amongst different forms of media led most to turn to print media.

Reporting Health News

The reporting of health news becomes a complicated issue in that it focuses on trying to understand what the interest of the audience is in regards to health news topics. On the one hand, Brodie, Hamel, Altman, Blendon, and Benson, (2003) argue that almost half of Americans are interested in health news. Additionally, for most people, print news media are their most important and consistent source of health information (Schwitzer et al., 2005). On the other hand, Shuchman and Wilkes (1997) contend that a journalist's failure to be accurate when sharing information, to identify health interests of the public, or to follow up on important health stories makes Americans less interested in printed health news. Likewise, Cooper, Burgoon, and Roter (2001) found that audience members, even if interested, do not remember much of the printed health information they come across in media. Tausczik et al. (2012) refute that claim saying that newspapers are the largest form of news that people turn to for when they need information about health and

that they can easily recall the most common health topics and ideas when using newspapers as a reference compared to other sources of health news.

This is important because Coleman, Thorson, and Wilkins (2011) suggest that framing and sourcing could play an integral part of the presentation of health news stories. Wright, Sparks, and O'Hair, (2013) suggest that framing is one factor responsible for the over reporting of common health news and the underreporting of less common health topics. Therefore, political views and biases of the newspaper as well as the journalist influence the decision to frame certain health topics and not others (Wright et al., 2013).

Additionally, Wright et al. (2013) claim that another factor in the over reporting of health related news stories is focusing on the issue and avoiding the health problem and this is largely in the journalists control. To influence that control, media, specifically newspapers, provided quoted sources to address a particular health topic from a desired point of view. This is also known as sourcing the final factor (Coleman, Thorson, & Wilkins 2011). Sourcing focus is on the elite and not the ordinary source. A newspaper's sources are more likely to include government officials, subject matter experts, professors, scientists, or spokespeople and are less likely to include an everyday individual dealing with the health topic (Gao, Zhang, & Sadri, 2011; Tanner, 2004; Wright et al., 2013). Tanner (2004) believes that most of the quotes that do make it to the public never seem to resemble the way it was originally reported to journalists. Wright, et al. (2013) concede that information left out of quotes may be a direct result of deadlines, available print space, or over wordiness of the speaker. Furthermore, for the newspaper it may be difficult to convey accurately the quoted information because of a host of other

factors. Yet, the crucial role is still to translate and communicate expert health knowledge in a clear and understandable way, especially during times of trouble (Glik, 2007; Massimo, 2012).

The primary frames for the majority of health topics can be seen as risk and crises oriented. Additionally, while the frame is the focus the newspaper places on the article, the article itself contains many of the previously mentioned components of CERC, SCCT, and EPPM. Framing analysis of health topics in print is very exhaustive not only in breadth but also in depth and geographical settings. Therefore, it is important to bear in mind other theoretical constructs and how each contribute to the frame being what it is. Manganello and Blake (2010) show that news media messages over two decades placed increased emphasis on the health-related topics of substance use, violence, sex, and obesity, and body image. Additionally, framing analysis of newspapers on many other health topics such as alcohol, (Myhre, Saphir, Flora, Howard & Gonzalez, 2002) mental illness, (McGinty, Webster, Jarlenski & Barry, 2014; Van Gorp & Vercruyssen, 2012) HIV-AIDS, (Kiwanyika-Tondo, Albada & Payton, 2012) health disparities, (Kim, Kumanyika, Shive, Igweatu & Kim, 2010; Stefanik-Sidener, 2013; Young, Norman & Humphreys 2008) health policy, (Kenterelidou, 2012; Sznitman & Lewis, 2015; Van Gorp & Vercruyssen, 2012), and vaccines (Hussain, 2011; O'Keefe & Nan, 2012; St. John III, Pitts & Tufts 2010) have been conducted.

A smoking ban examined by Kenterelidou (2012) suggested framing was more episodic than thematic. Berry, Wharf-Higgins, and Naylor (2007) argue that print health news contain frames that focus more on harms and outcomes than there were frames on prevention. In contrast to that, when Sznitman and Lewis (2015) found that the framing

of cannabis as a medicine showed many benefits. Furthermore, Snitzman and Lewis (2015) found newspaper articles that showed benefits of cannabis tended more in health related sections of a newspaper versus when cannabis as a prevention measure. Daw, Morgan, Collins, and Abelson (2014) concluded that general framing focused more on problems than on solutions.

Some health topics are framed because of seasonal occurrences or waves of popularity, and it becomes evident that the frames can vary in complexity and that these cycles show up in print. Cyclical framing is a process demonstrated by Kiwanuka-Tondo et al., (2012) who showed frames in AIDS coverage as it went from discussing harms, outcomes, and prevention and back to harm. This cycle was evident even over a short period. Caulfield, Clark, McCormak, Rachul, and Field (2014) examined the framing of Vitamin D over five years and observed the same cyclical pattern. This occurrence and reoccurrence of different types of frames occurs also in health framing. It manifests sometimes in the representation of risk and crisis frames; for example, “articles facing food related hazards tend to be alarming (crisis)” each year during the summer (Carducci, Alfani et al. (2011). Episodic frames found by Kenterelidou, (2012) acted similar to dominant or prominent frames yet appeared less often; whereas, thematic frames were secondary and appeared frequently suggesting a cycle. Another health topic that appears cyclically, along with method of framing, is influenza as represented in several studies about flu messages (Doudaki, 2011; Karlsson, 2012, Shih, Wijaya & Brossard, 2008). Health topics more than other news items follow this cyclical pattern. Frames will often be different because primary frames are competing against other frames for the same

audience and message space no matter where the point in the cycle (Fowler, Gollust, Dempsey, Lantz & Ubel, 2012).

Framing and Reporting Influenza

Scholars have used media framing to examine the avian flu, also known as bird flu or H5N1. Several different countries examined the same period to analyze the framing of avian flu in their respective countries (Abeysinghe & White, 2010; Dudo, Dhalstrom & Brossard, 2007; Fung, Namkoong, & Brossard, 2011; Krishnatray, 2014; Vasterman & Ruigrok, 2013). The 2009 pandemic H1N1 flu virus is highly studied as it is among the most notable flu viruses in recent years and garnered widespread media attention. Gao et al. (2011) found that more sources were used in reporting about H1N1 in newspaper articles when compared to other print sources specifically health blogs. Of the seven frames identified, the top three frames were action, severity, and conflict (Gao et al., 2011). However, in looking at frame dominance the most common was severity. This may indicate that with pandemic flus, such as H1N1, a newspaper may place more importance on the widespread nature of the flu versus the actions taken to prevent it (Gao et al., 2011).

Smith et al. (2013) looked at international newspaper coverage of H1N1 and learned that all frames for H1N1 focused on gaining and retaining attention of the public. This is supported by Miczo, Danhour, Lester and Bryant (2013) who saw that the memorable messages of H1N1 in the United States came from mass media sources, among which was the source of major newspapers. Jung Oh et al. (2012) in a cross-national look at attention of H1N1 in news coverage reported similar findings. Liu and Kim (2011) examined how United States organizations used this attention keeping in

both traditional and non-traditional media sources to keep H1N1 framed as a pandemic and central to their primary publics.

These results have contributed to the fields of risk and crisis communication. Noteworthy is the following concept. If a public is aware of a risk then it only takes a minimal amount of threat within the message to make it effective (Gore & Bracken, 2005; Nabi, 2015). Other contributions include the idea of mutuality. Mutuality exists when the sender of a message has it manifested back and is possible only if enough people share the same response. This usually comes out of messages shared from mass media source typically a newspaper (Kent & Taylor, 2002; Levin, Schneider & Gaeth, 1998; Paquette, Sommerfeldt & Kent, 2015; Reese, 2007; Theunissen & Noordin, 2012). As witnessed by Klemm, Das, and Hartmann, (2014) mutuality resulted in the form of media sources being labeled as drama-laden or drama-free and were predicted using EPPM. EPPM has also been used to predict a behavioral outcome of an individual or group of individuals from risk messages (Newcomb, 1984; McMahan et al., 1998; Witte, 1992, 1994; Witte et al., 2001; Zhang, Kong, & Chang, 2015).

Rationale

Previous, flu-related content analyses have been constructed to focus on an individual type of flu, a short period of time, a particular type of media, isolated locations, chiefly during the time period the flu was most active. As a result the chief interest of this study is to explore, as well as compare and contrast, the presence of several different theoretical variables use and presence before and after, the most recent and highly studied flu pandemic, H1N1, and are necessary to help journalists prepare the public to better respond to the annual flu crisis.

The theoretically diverse variables of this study come from Framing, CMP, EPPM, CERC, and SCCT and they work together in a novel and unique way to bring added understanding to what is being presented in newspapers about the flu. Framing provides a novel contribution for examining the flu by using a natural frame that corresponds nicely with the different stages of the CMP and allows for a clearer picture on how cyclical the process of reporting the flu as a crisis really is. Constructs from EPPM represent important message components which ultimately control the public response to flu messages. Lastly, CERC and SCCT contain identifiable pieces that when incorporated into information shared with the public during a crisis build credibility and trust and result. These variables individually may have different outcomes on how a message is received. However, when used collectively to examine newspaper flu risk and crisis communication it allows for a more opportunity to show what could be improved in future messages. As such the research questions asked are:

RQ1: What is the difference in the framing of the flu before H1N1 and after H1N1 between *The Washington Post*, *USA Today*, and *The New York Times*?

RQ2: What is the difference in severity, susceptibility, and efficacy pre-H1N1 and post-H1N1 between *The Washington Post*, *USA Today*, and *The New York Times*?

RQ3: What is the difference in excuse and justification pre-H1N1 and post-H1N1 between *The Washington Post*, *USA Today*, and *The New York Times*?

RQ4: What is the difference in intention, expertise, and trustworthiness pre-H1N1 and post-H1N1 between *The Washington Post*, *USA Today*, and *The New York Times*?

Chapter three introduces the content analysis methodology used for this research. Next, it reviews the sample selection process, the codebook structure and the procedures for coding. The chapter concludes with a discussion of coder training and reliability.

Chapter Three: Methodology

Content analysis is a research method that allows flexibility while focusing on a communication message (Harwood & Garry, 2003; White & Marsh, 2006). A chief goal of content analysis is to make inferences about the results through understanding the contextual origin (Downe-Wamboldt, 1992; Roberts, 2000; Stemler, 2001). Content analysis is achieved primarily by using a qualitative, a quantitative, or mixed method-approach. Most researchers opt for either a quantitative or qualitative approach and rarely use the mixed approach (Krippendorff, 1989; Oleinik, 2011, Macnamara, 2005 Stemler, 2001).

A quantitative content analysis is the method of choice for this research (Roberts, 2000). It is the appropriate method in that it allows for a coding scheme by which the coverage, accuracy of information, and distribution of various themes can be measured (Aarva & Tampere, 2006; Franzosi, 2008). The purpose of this study is to identify and quantify the different stages of crisis, as well as key points from CMP, EPPM, SCCT, and CERC compared between newspapers and across years. This method is particularly useful because of its assistance in looking for patterns in the data and learning common themes/frames as portrayed in the media.

Sample

The most popular way that Americans report finding their news is directly from a news organization (88%), such as a newspaper (American Press Institute, 2014). Furthermore, 61% of Americans used print newspapers to follow self-relevant news stories during an average week (American Press Institute, 2014). A four-part criterion was used for selecting the newspapers used in the study. First, each newspaper is

nationally in the top 25 for weekday readership (Alliance for Audited Media, 2015). The second criterion is the newspaper had to have been in print for more than twenty years (Alliance for Audited Media, 2015). The third criterion is the newspapers were in *Lexis-Nexis Academic* database. The fourth and final criterion is influence on regional and local newspapers to further disseminate national stories. (Alliance for Audited Media, 2015). Furthermore, two of the three newspapers, *The Washington Post* and *The New York Times* are acknowledged to influence how other news sources cover topics (An & Gower, 2009; Merrill, Schneider & Fletcher, 1980). The remaining newspaper, *USA Today*, is considered to be the newspaper that reflects the pulse of the nation while also serving as the host of the conversation of newsworthy topics (Marketing, 2015). Of the United States newspapers that met the four-part criterion the three used are *The Washington Post*, *USA Today*, and *The New York Times*.

First, by using *Lexis-Nexis Academic* two groups were created consisting of articles from the three newspapers. Group 1, January 1, 2006 to January 1, 2009: pre-H1N1 and Group 2, January 1, 2011 to January 1, 2014: post-H1N1. These years allowed for the exclusion of coverage of the pandemic H1N1 flu virus, which was first described in late April 2009 and declared the pandemic as ended by mid-August 2010 and has been researched at length (EURO, 2010; Trifonov, Khiabani & Rabadan, 2009). Next, the words “flu” or “influenza” were used as search terms in the headline and/or lead paragraph(s) of each of the newspapers. As with previous studies, the exclusion of stories with less than a 175 word count, opinion articles, advertisements, and letters to the editor was part of the selection process (Kenney & Simpson, 1993; Sinclair, 1982). Finally, the

sample excluded any high similarity articles from the same newspaper and articles reprinted by a different source (e.g., *New York Times* reprinting a *Los Angeles Times* article).

For pre-H1N1, *The Washington Post* had 383 available units; *USA Today* had 134; and *The New York Times* had 298 units respectively creating a total population of 815 possible units of analysis from pre-H1N1. In post-H1N1 *The Washington Post* had 202 available units; *USA Today* had 75; and the *New York Times* had 236 units and 513 possible units of analysis. Each article from each newspaper in both groups received a unique identification number. Next, using a random number generator a number was identified as the starting point for pre-H1N1. From this point, every tenth article from each newspaper was included in the sample. Post-H1N1 was formed using the same steps. The sample of this study consisted of 79 articles from pre-H1N1 and 50 articles from post-H1N1 or 129 articles collectively.

An disproportionate number of articles from pre-H1N1 and post-H1N1 after coding was evident and resulted in a second sample being taken from the population in order to balance pre-H1N1 and post-H1N1. The oversampling selection procedure followed the same protocol explained previously and yielded 33 articles. Additionally, they were coded with same coding procedures discussed below.

Codebook and Coding Procedure

The codebook found in Appendix A consisted of two sections based on the foundations of CMP, SCCT, CERC, and EPPM and for newspaper coding and contains two sections. The first section includes the following coding categories (1) newspaper name; (2) length- the number of words in each article; (3) flu type- flu or influenza,

seasonal flu, H5N1 or avian or bird flu, H1N1 or Swine Flu, influenza type A, B, C as well as other and none of the above; (4) frames. The frame was determined based primarily only the date the article was printed. Doing so allowed for the association with CMP's stages: pre-crisis, crisis, and post crisis. This eliminates what Entman et al., (2009) identified as secondary frames that may appear as individual elements. Therefore, each newspaper article only had one frame by which it was identified and its subparts were to be examined through the second half of the codebook.

Key theoretical constructs are the basis for the design of the second section of the codebook. It begins by identifying the presence of at risk flu populations; parents of children younger than two, individuals 65 and older, pregnant women, persons with chronic medical conditions everyone 6 months and older, other, and none and whether or not they are identified as at risk. After which the code book addresses the constructs of perceived self-efficacy, susceptibility, and severity as used in the EPPM. Government officials, subject experts, or a laypeople and their quotes are the final part of the codebook. The quotes are examined for the use of strategies and tactics of SCCT such as the use of diminish, excuse and justification as well as trust and credibility from CERC. Word and phrase usage, acknowledgements, minimizations, and information sharing were the basis from which content of the quotes were analyzed. Appendix A contains the complete codebook.

An independent coder and the researcher from a large Southern University carried out a content analysis of the 129 articles from the *New York Times*, *USA Today*, and *Washington Post* dating from January 1, 2006 to January 1, 2009 and January 1, 2011 to January 1, 2014. Content and subjectivity assess message characteristics as the essential

component of the categorical framework. Theories and models used in risk and crisis communication that both address the proper methods of response to the various stages of a health crisis as well as make predictions about health behavior of health communication via newspapers were the basis of the content analyzed in the quotes.

Coder Training and Reliability

The coders trained for ten hours on articles not of the sample. During the training, coders spent much of the time identifying and differentiating between constructs e.g. excuse vs. justification, self-efficacy, and so on. Upon completion of the training 10% of the data ($N = 13$ articles) were coded by both coders and intercoder reliability was measured. Cohen's Kappa (κ) was the statistic used to evaluate the extent to which there was agreement amongst the coders. Cohen's κ was the most suitable statistic for determining intercoder reliability on the basis that it is viewed as a robust statistic and is most appropriate for two coders (Cohen, 1960). Additionally, Cohen suggested that Cohen suggested the results of Cohen's κ be interpreted in the following way: values ≤ 0 as indicating no agreement, a measure of 0.01–0.20 as “none to slight”, 0.21–0.40 as “fair”, and 0.41– 0.60 as “moderate”, 0.61–0.80 as “substantial”, and 0.81–1.00 as “almost perfect” agreement. With that understanding McHugh (2012) states that the minimum acceptable amount recommended for intercoder agreement using Cohen's κ in health research is 0.80. Cohen's κ for the current study ranged from -0.001 to 1.000 and is presented in Table 5.

Table 5 Cohen's Kappa Results

Article	κ value	Article	κ value
#1	0.589	#8	0.661
#2	0.510	#9	1.000
#3	0.702	#10	0.559
#4	0.928	#11	1.000
#5	-0.001	#12	1.000
#6	0.820	#13	1.000
#7	0.889	All	0.700

The two coders then divided the remaining data equally ($N = 58$).

The next chapter shares findings from chi-square tests and other data analysis conducted using Statistical Package for the Social Sciences (SPSS). Additionally, it highlights the findings that are significant as they relate to each of the variables in the proposed research questions.

Chapter Four: Results

A total of 116 articles from the *New York Times*, *USA Today*, and *Washington Post* were coded. During coding 47 articles were removed due to their lack of explicit mention of the flu leaving only 69 articles. Of those 69 there were 51 articles coded from Group 1 (January 1, 2006, to January 1, 2000: pre-H1N1) whereas only 18 came from group 2 (January 1, 2011, to January 1, 2014: post-H1N1). The unbalanced results made it difficult to conduct comparisons between the two groups. Therefore, the researcher returned to the population, sampled and coded an additional 33 more articles weighted to their actual proportion in the population for post-H1N1 bringing the total number of articles coded to 102 as displayed in Table 6.

Table 6 Results of Coding With and Without the Oversample

Group	With Oversample			Total
	<i>NYT</i> *	<i>UT</i> **	<i>WP</i> ***	
Pre-H1N1	9 ^a , 18% ^b	20, 39%	22, 43%	51, 100%
Post-H1N1	13, 26%	21, 41%	17, 33%	51, 100%
Total	22, 22%	41, 40%	39, 38%	102, 100%

Group	Without Oversample			Total
	<i>NYT</i> *	<i>UT</i> **	<i>WP</i> ***	
Pre-H1N1	9, 18%	20, 39%	22, 43%	51, 100%
Post-H1N1	2, 11%	5, 28%	11, 61%	18, 100%
Total	11, 16%	25, 36%	33, 48%	69, 100%

* *New York Times*, ***USA Today*, *** *Washington Post*. Note: ^a represents the number of occurrences and ^b represents the % of the total.

Research Question 1

The first research question sought to determine if there was a difference in the framing of the flu before and after H1N1 among *The Washington Post*, *USA Today*, and *The New York Times*. Of the 102 articles included in this study, 40 (39.2%) of the articles

were found to be framed as pre-crisis. Furthermore, around half (55%) were from pre-H1N1 and, half were from post-H1N1 respectively. Thirty-nine articles (38.2%) were framed as crisis. With, approximately half (48.7%) coming from pre-H1N1 and just over half (51.3%) in post-H1N1. The remaining 23 articles (22.6%) made up post crisis frames, 10 (43.5%) from pre-H1N1 and 56.5% from post-H1N1 (see Table 7). The first research question asked if there is a difference in framing between the two groups. A chi-square test was performed for framing and no significant difference was found between pre-H1N1 and post-H1N1, $\chi^2 (2, N = 102) = 0.82, p = 0.665$.

Table 7 Results of Framing

Stage of Crisis	Pre-H1N1	Post-H1N1	Total
Pre-Crisis- August 15 to September 30	^a 22, 55% ^b	18, 45%	40, 39%
Crisis- October 1 to May 31	19, 49%	20, 51%	39, 38%
Post Crisis- June 1 to August 14	10, 43%	13, 57%	23, 23%
Total	51, 50%	51, 50%	102, 100%

Note: ^a represents the number of occurrences and ^b represents the % of the total.

Research Question 2

The second research question asked if there was a difference in severity, susceptibility, and efficacy pre-H1N1 and post-H1N1 in newspaper coverage between *The Washington Post*, *USA Today*, and *The New York Times*. To determine if there was a difference in severity, susceptibility, and efficacy between the groups, pre-H1N1 and post-H1N1 several different chi-squares were calculated. It revealed that for severity $\chi^2 (1, N = 102) = 4.99, p < 0.5$. As a result there is a statistically significant association between pre-H1N1 and post-H1N1 for severity. Therefore, the presence of severity did

differ in newspaper articles between pre-H1N1 and post-H1N1. In the case for the variable of susceptibility it revealed $\chi^2(1, N = 102) = 0.88, p = 0.767$. As a result, there was no statistically significant association between pre-H1N1 and post-H1N1 for susceptibility.

Lastly, in regards to efficacy $\chi^2(1, N = 102) = 0.37, p = 0.545$. A closer examination of efficacy was conducted by dividing it into three types. The first type was discussion of efficacy, the second type was the reinforcement of efficacy and finally the third type was the promotion of efficacy. For the discussion of efficacy a chi-square revealed $\chi^2(1, N = 102) = 0.38, p = 0.537$. Through a chi-square reinforce efficacy revealed $\chi^2(1, N = 102) = 0.38, p = 0.173$. Lastly, promotion efficacy's a chi-square resulted as follows $\chi^2(1, N = 102) = 3.22, p = 0.073$. For all three types of efficacy there was no statistically significant association between pre-H1N1 and post-H1N1. That is to say that between pre-H1N1 and post-H1N1 there was little evidence supporting the idea that the use of susceptibility and efficacy in newspaper reporting have changed in the time following H1N1.

Research Question 3

The research question asked if there was a difference in excuse and justification pre-H1N1 and post H1N1 in newspaper coverage between *The Washington Post, USA Today, and The New York Times*. In order to determine if there was a difference in excuse and justification between pre H1N1 and post-H1N1, a chi-square was performed for each variable. For excuse the chi-square revealed $\chi^2(1, N = 102) = 5.92, p < 0.05$ and for justification it revealed $\chi^2(1, N = 102) = 3.36, p = 0.067$. There was no statistically significant association between pre-H1N1 and post-H1N1 in respect to justification.

However, there was a significance for excuse which demonstrates that overall that the presence of excuse as manifest in newspaper quotes has changed in the time since H1N1.

Research Question 4

The final research question asked of this study was if there was a difference in intention, expertise, and trustworthiness pre-H1N1 and post-H1N1 in newspaper coverage between *The Washington Post*, *USA Today*, and *The New York Times*? To examine if there was a difference in intention, expertise, and trustworthiness between groups 1; pre-H1N1 and post-H1N1 a chi-square was executed individually for the different variables. For the variable intention the chi-square yielded $\chi^2 (1, N = 102) = 0.18, p = 0.670$. Next, the chi-square for expertise was $\chi^2 (1, N = 102) 1.55, p = 0.214$ and finally in trustworthiness a chi-square revealed as $\chi^2 (1, N = 102) 0.403, p = 0.525$. There was no statistically significant association between pre-H1N1 and post-H1N1 in respect to intention, expertise, and trustworthiness. That is to recognize that between pre-H1N1 and post-H1N1 there was little evidence to show that the intention, expertise, and trustworthiness or individuals quoted in newspapers have changed in regards to H1N1.

The next chapter discusses in more detail the statistical findings found through the data analysis for each research question. In addition to the discussion it offers limitations and highlights areas for future research.

Chapter Five: Discussion

The purpose of this study was to explore health risk and crisis flu messages in three United States newspapers, *The Washington Post*, *USA Today*, and *The New York Times*, for their use of several theoretical constructs including framing, severity, susceptibility, efficacy, excuse, justification intention, expertise, and trustworthiness. These constructs came from Framing, Crisis Management Process (CMP), Extended Parallel Process Model (EPPM), Situational Crisis Communication Theory (SCCT), Crisis and Emergency Risk Communication (CERC) theories. A major strength of this research is that it appears to be the first quantitative study to do so. Furthermore, the study examined the messages three years before and after the H1N1 flu epidemic. Overall, the results showed minimal differences with these constructs with the exception of two, severity and excuse.

Research Question One

The first aim of this study was to assess the difference of framing flu before and after H1N1. Frames than consisted of either being pre-crisis, crisis, or post-crisis and corresponded to the dates of a regular flu season. As a result the similarity that existed in the framing of flu according to the phases both pre-H1N1 and post-H1N1 is not surprising. It could be what Goffman (1974) was identifying as a natural frame manifested itself. Thus, the flu was presented with more mentions during flu season and fewer before and after regardless of the newspaper. It could also be that this study could have benefited from another type of frame, perhaps a social frame. Instead of focusing on Goffman's natural frame, it might have been more beneficial to identify and use the social frames that Staniland and Smith (2013) presented which were subsequently

uncovered through similarly based studies of H1N1 news coverage. If not these social frames then perhaps it could be that a more beneficial social frame would have identified a specific strand or attribute of the flu to study. The majority of flu presented in the articles focused primarily on Avian Flu ($N = 66$) and few focused on the attribute of a current active human contractible flu ($N = 8$).

Although no difference was found the most likely explanation of the finding is that only one frame, the stage of CMP, was examined. This result is in agreement with Matthes (2009) who identified 2-3 as the optimal number of frames to examine during an analysis. This study showed an increase in post-crisis news articles post-H1N1 which could be the ongoing process of renewal. This would then suggest that rebuilding, prospective communication, reconstitution, and leader based, the four characteristics of renewal put forward by Ulmer, Seeger and Sellnow (2007), would also be manifest in these articles.

Research Question Two

A subsequent interest of the research was to examine differences in the presence of EPPM constructs severity, susceptibility, and efficacy before and after H1N1 among three major US newspapers. Witte and Allen (2000) emphasized that efficacy should be the most pronounced above all others. In post-H1N1 articles, efficacy was present the least followed by severity and susceptibility. That said however, an examination of the data revealed that even though severity decreased, susceptibility remained constant. Because of the discrepancy found between severity and susceptibility an auxiliary analysis was performed to see how many articles included both; the results are surprising. Only 6% ($N = 51$) of post-H1N1 articles included both susceptibility and severity. It

could be that journalists intended to minimize public fear of another widespread epidemic. Furthermore, it should be noted, though, that 57% of the articles communicated efficacy (47% communicated things to reinforce efficacy, and 53% promoted efficacy). The findings are consistent with previous research by Turner, Boudewyns, Kirby-Sraker, and Telfer (2013) that examined the presence of all EPPM constructs when discrepancies were found between severity and susceptibility.

Of the constructs of severity, susceptibility, and efficacy, efficacy still should remain the top priority. The fact that efficacy was present less post-H1N1 than the other constructs poses a myriad of problems, chiefly for the public in terms of response and prevention. In general, to encourage public action to do something news articles need to pose information at a moderately high level of susceptibility. However, that is only half the problem, the public also needs to possess higher levels of efficacy, even more specifically and importantly response efficacy, possibly from better messages in the pre-crisis stage of CMP. Both Witte (1994) and Barnett et al. (2009) support this showing inaction occurs when susceptibility outweighs response efficacy. Furthermore, Jardine and Hrudey (1997) as well as Frewer (2004) add inaction may be accompanied by feelings of frustration and confusion and compounded by the imbalance of susceptibility and response efficacy. It is also possible there is an interaction between severity and when it is presented, pre-crisis, crisis, post-crisis, and the way in which it is presented, statistics or stories, that may make it do more harm than good in encouraging flu preventive behaviors. This would then suggest the need for more messaging that increases reader efficacy before flu season begins.

Research Question Three

In regards to specific differences between excuse and justification, there was an inclination for excuse to be used more frequently than justification. This is what one would expect, based on previous research that shows that excuse is more prevalent in reoccurring crises chiefly because it encompasses the ideas of the inability to control the crisis and the denial of intentions to do harm (Coombs, 2007; Shaw, Wild, & Colquitt, 2003). It is interesting to note that just as excuse increased in post-H1N1 articles, justification also increased, however, not to a level of significance. This too is consistent with previous research (e.g., Jin, 2010) that when a crisis is viewed as predictable and controllable, which the flu is, excuses are more dominant than justifications. This may be because an excuse contains what is needed to reduce the immediate stress caused by the crisis. Although it might have been expected that an increase in either justification or excuse would have led to a decrease in the other this was not the case. It is possible that uses of both excuse and justification help decrease the connection between the organization and the crisis and help the public to see the crisis in a less adverse way.

It was also interesting that excuse and justification were both present more after H1N1 than before. This is worth noting because Shaw, Wild, and Colquitt (2003) indicate that increased levels of excuse in print can lead to negative audience reactions. The increased levels of excuse and justification about the flu should then be some reason for concern. The newspapers that saw the greatest change in excuse and justification were *The Washington Post* and *The New York Times*. In particular the increased number of representations of excuse and justification could be the result of international news coverage, or the interest of readers on foreign affairs and international business impacts. Such results could not be measured and may be a question future research can examine.

Therefore, all results of excuse and justification further strengthen them as appropriate diminish strategies as having met SCCT crisis response strategy guidelines.

Research Question Four

A final aim of this study was to investigate whether intention, expertise, and trustworthiness varied before and after H1N1. These are essential for creating effective communication which in fact is credibility (Reynolds & Seeger, 2005). For purpose of discussion trustworthiness is categorized as being open and honest while also avoiding paternalistic tendencies as well as professional jargon and euphemisms (Reynolds & Seeger, 2005). Expertise is viewed in terms of competence and knowledge and is created by the sharing of an individual's education, position, title, organizational roles and mission (Reynolds & Seeger, 2005). Intention involves many factors, including empathy, caring, commitment, and dedication mission (Reynolds & Seeger, 2005). Therefore, an increase in these would be seen far more favorably than a decrease (Reynolds & Seeger, 2005). In general the study revealed that all three, trustworthiness, intention, and expertise, decreased post-H1N1. This could also be accounted for as a result of examining the quotes in each newspaper article collectively instead of individually. Furthermore, it may also be a direct result of journalists not including enough information about their sources that substantiates expertise, intent, or trustworthiness.

With respect to differences among newspapers there was none. However, it was found and worth noting that the decrease in trustworthiness, intention, and expertise was not drastic nor was the decrease in trustworthiness, intention, and expertise more prevalent in any one newspaper. Although the change was not severe there was a slight tendency for intention more than trustworthiness to be present. This could be attributed to

the finding that excuse is present more than justification, with the result that intentions could be taking the form of excuses. Additionally, expertise could be attributed to a lack of presentation of education, position, title, organizational roles and mission on part of journalists. However, this may also be due to imposed limitations on journalists.

Recommendations

For most people, print news media are their most important and consistent source of health information (Schwitzer et al., 2005). This places a great deal of responsibility on newspapers and journalists to constantly be sharing health related stories.

Unfortunately, newspapers and journalists are also being scrutinized for exaggerating the benefits and minimizing harms particularly in relation to medication, hyping health risks, and overemphasizing only preliminary research (Cassels et al., 2003; Moynihan et al., 2000; Rowe, Frewer & Sjoberg, 2000).

Based on the findings of this study, as well as suggestions made by others (Avery & Kim, 2009; Covello, 2003; Holmes et al., 2009; Picard & McMahon, 2005; Schwartz & Woloshin, 2004; Shuchman & Wilkes; 1997) the following recommendations for newspaper companies and journalists are presented in Table 8. The presented recommendations are suggested to improve the reporting of health risk and crisis based print news and subsequently public health advocacy.

Table 8 Recommendations for Improved Reporting of Health Risk and Crisis in Print News Newspaper Companies

- Hire full-time health journalists or train current journalists to understand and report statistics, technical/jargon filled language, and prevention messages
- Increase space allotted for health related news stories
- Advocate increased health news coverage across all media forms

Journalists

- Practice doubt about everything
- Share information that promotes reader efficacy
- Provide both a context and significant details in stories

- Avoid reporting preliminary findings and use data to backup any sensational claims
 - Include the grey area or caveats of research while limiting sharing health stories as simply black and white
 - Integrate health outcomes into other news stories as appropriate
 - Meet regularly with Health Public Relations Professionals
-

Limitations

A primary limitation of this study was that the calculation for intercoder reliability using the most appropriate method, Cohens Kappa, for intercoder reliability was taken and reported after the study was completed. Another limitation of this study that several articles made it to the final sample for coding and were then thrown out because they lacked explicitness in addressing the flu. That being said those articles came from lesser thought of sections – in regards to the topic – of the newspaper such as the sports section or community events page and should be considered for elimination in future searches using these newspapers as well as the *LexisNexis Academic* database. Furthermore, it is possible, that the oversample or something specific in the years examined may have prejudiced the findings, although potential ones were controlled. An additional limitation was that the study assessed quotes collectively not individually. Also, as short periods before and after a central crisis, H1N1, were examined, inferences could not be made about longitudinal trends. Lastly, as a quantitative study the fullness as well as the breadth of understanding that comes from qualitative research are missing

Future Research

Future studies could expand on this content analysis by conducting similar research looking at other types of risk and crisis reported in these newspapers. A second addition to this analysis would be an expanded examination encompassing either longer

periods of time or comparing it to the content of online newspapers as this information may differ from what is in print newspapers. An expanded sample may also include regional newspapers that might also reveal more differences. Additionally, the examination could focus on one flu strand and the health risk and crisis communication strategies comparing it to a different flu strand. One final direction for future research would be to measure reader effects using some of the articles from the sample.

As a final note, this study serves to remind both journalists and health public relations professionals that there has been no increase in the amount of reporting on the flu even after a major crisis (Reynolds & Quinn, 2008). While it is important that newspapers report on crises that directly impact the public in the moment; it is important for health public relations professionals to understand that not talking about risks beforehand may have adverse impacts on populations, both directly and indirectly, and just as much if not more so than talking about them during or after a crisis. Especially as infectious diseases and health crises become all the more common in the coming years.

Appendix A: Codebook

Unit of Analysis- Newspaper Articles **If the article is unable to be coded, place a 99 as the coder ID**

Section One: General Information

- A. Coder Id Number: (Self-created 4 digit identifier; ex. 0407)
 B. Unit of Analysis Code: (Number on the file, ## of ### documents)
 C. Newspaper (1= The Washington Post, 2= USA Today, 3= The New York Times)
 D. Headline: (Copy and paste the headline of the article here)
 E. Location (Section and Page)
 F. Length: (Number of words)
 G. Does the article **explicitly** address flu? (0= No, 1= Yes)

Note: **Explicit** here means if you had to ask yourself what the theme of the article as a whole is could you confidently say it is the flu).

1. How is flu mentioned (0= not present, 1= present) Note: **multiple elements can be present**)

- a) Flu or Influenza
- b) Seasonal flu
- c) H5N1 or Avian or Bird flu
- d) H1N1 or Swine Flu
- e) Influenza Type A
- f) Influenza Type B
- g) Influenza Type C
- h) Other (open ended)

2. How it the flu framed

- a) Pre or Post 2009 (1= pre 2009, 2= post 2009)
- b) Pre-Crisis (Date of newspaper article is from August 15 to September 30)
- c) Crisis (Date of newspaper article is from October 1 to May 31)
- d) Post Crisis (Date of newspaper article is from June 1 to August 15)

*Section Two: Theoretical Components***EPPM FRAMEWORK**

Perceived Self-Efficacy - *The perception the individual has that they are competent to perform the tasks needed to control the risk.* Ex. Getting ready for flu season is as easy as 1 2 3.

Perceived Susceptibility - *The perception the individual has of how likely the threat is to impact them* Ex. The flu is affecting 1 out of 5 school age children this year.

Perceived Severity - *The perception the individual has of the magnitude of the threat.* Ex. Rockingham County schools close today because of high volumes of students with flu.

Are any of the populations below discussed in the article?

Note: ***Explicit*** here means the population is clearly stated.

- i. Parents of children younger than two (*0= No, 1= Yes*)
 - If yes, are they discussed as being at risk for catching the flu? (*0= No, 1= Yes*)
- ii. Individuals 65 and older (*0= No, 1= Yes*)
 - If yes, are they discussed as being at risk for catching the flu? (*0= No, 1= Yes*)
- iii. Pregnant women (*0= No, 1= Yes*)
 - If yes, are they discussed as being at risk for catching the flu? (*0= No, 1= Yes*)
- iv. Persons with chronic medical conditions such as asthma, cancer, diabetes (*0= No, 1= Yes*)
 - If yes, are they discussed as being at risk for catching the flu? (*0= No, 1= Yes*)
- v. Everyone 6 months and older (*0= No, 1= Yes*)
 - If yes, are they discussed as being at risk for catching the flu? (*0= No, 1= Yes*)
- vi. People working in medical settings (*0= No, 1= Yes*)
 - If yes, are they discussed as being at risk for catching the flu? (*0= No, 1= Yes*)
- vii. Other (*0= No, 1= Yes*)
 - If yes, who are they? (*open ended*)
 - Are the “other” discussed as being at risk for catching the flu? (*0= No, 1= Yes*)

Is this a “self-efficacy” message? (*0= No, 1= Yes*)

a. How is self-efficacy expressed (*1= descriptive words, 2= personal stories, 3=statistics, 4=combination*)

1. Does the newspaper article (*0= No, 1= Yes*)
 - Mention behaviors that promote efficacy?
 - Talk about prevention
 - Mention individuals should go talk to their healthcare provider if they have questions.
 - Mention individuals should get vaccinated.
 - Mention solution as easy and outweighs the costs: e.g., Vaccine is free/cheap/easy to get.
 - Mention vaccine also protects against other illnesses such as pneumonia
 - Mention information seeking behavior (e.g., visit a website, talk to..., download...etc.)
 - i. How does the newspaper article reinforce efficacy? (*Explicit, not implied!*) (*0= No, 1= Yes*)
 1. Positive consequences/outcomes of prevention mentioned
 2. Positive impact on community/society
 3. Past stories of prevention
 4. Failure to prevent
 5. Mention of random nature of illnesses

6. Personal benefits of prevention (e.g. emotional and physical security)
7. What to do
8. Refutation of excuses for not vaccinating.
- ii. Is this a “susceptibility” message? (0= No, 1= Yes)
 - a. How is susceptibility expressed (1= descriptive words, 2= personal stories, 3=statistics, 4=combination)
- iii. Does the newspaper article talk about (0= No, 1= Yes)
 1. individuals worries about the flu
 2. the flu being a big concern
 3. the flu not being a big problem
 4. the chances of getting the flu
 5. who is getting the flu
 6. where the flu is
 7. where the flu is heading (geographically)
- iv. Is this a “severity message”? (0= No, 1= Yes)
 - a. How is severity expressed (1= descriptive words, 2= personal stories, 3=statistics, 4=combination)
- v. Does the newspaper article talk about (0= No, 1= Yes)
 1. how individuals have been impacted by the flu
 2. the individual consequences of not getting vaccinated
 3. individual monetary costs associated with the flu
 4. individual social impacts of the flu (not monetary)
 5. societal consequences associated with the flu (not monetary)
 6. societal monetary costs associated with the flu
 7. compare the flu to itself
 8. compare the flu to other disease/illness
 - 9.
4. Does this article offer information about flu prevention? (0= No, 1= Yes)
 - a. If no is it explained why information isn’t available? (0= No, 1= Yes, 99= NA)
 - i. If yes is the information positive or negative (0= Positive, 1= Negative, 2= Unable to determine 99= NA)
 - ii. If yes are suggestions made on how to prevent the flu (0= No, 1= Yes, 99= NA)
 - iii. If yes is there enough information to make an informed choice about how to act (0= No, 1= Yes, 99= NA)
 - iv. If yes is the information short – 3 or 4 action steps (0= No, 1= Yes, 99= NA)

CERC & SCCT FRAMEWORK

1. Government Official: *People who officially provide or represent a governmental response to the flu.*

Ex. The CDC reports that the flu has increased by 2.6% in the southwest since the beginning of the month.

2. Subject Expert: *Researchers, professors, or doctors who have professional or academic knowledge on the flu and provide new knowledge or information about the flu.*

Ex. Kenneth J. Taylor, MD, an associate professor of medicine at the Harvard School of Public Health who conducted that study (and others on the impact of flu vaccines on our health), tells The Washington Post that he isn't shocked by the latest findings. "In most cases, getting the vaccine is associated with lower risk of getting the flu," he says.

3. Lay Person: *People who experienced, observed, or are relevant to the flu but have no expert knowledge or political point of view.* Ex. Sarah mother of three makes sure he kids wash their hands and cover their mouth to keep from spreading the flu at their local elementary school.

- B. Are individuals quoted in the article (0= No, 1= Yes)
- a. If yes the journalist quotes: (1= Government official, 2= Subject Expert, 3= Lay Person, 4= Other)
 - b. If yes how many quotes by the different individuals listed above are in the article? (Insert total number for each individual quoted)

Answer the following for quotes.

- c. Are the individuals quoted by the journalist represented by their level of education? (0= No, 1= Yes, 99= NA)
- d. Are the individuals quoted by the journalist represented by a professional title? (0= No, 1= Yes, 99= NA)
- e. Are the individuals quoted by the journalist represented by the organization for which they are employed? (0= No, 1= Yes, 99= NA)
 - i. What is the organization? (0= no organization, 1= CDC, 2 = WHO, 3= NIH, 4= university, 5= other)
- f. Are the individuals quoted by the journalist reinforced with credible evidence (0= No, 1= Yes, 99= NA)
- g. Answer the following for quotes used by the journalist. Do the quotes:
 - i. express empathy and caring? (0= No, 1= Yes, 99= NA)
 - ii. express sympathy (0= No, 1= Yes, 99= NA)
 - iii. use condescending and/or judgmental phrases (0= No, 1= Yes, 99= NA)
 - iv. use speculation and/or assumption (0= No, 1= Yes, 99= NA)
 - v. use humor (0= No, 1= Yes, 99= NA)
 - vi. use professional jargon (0= No, 1= Yes, 99= NA)
 - vii. use personal pronouns when referring to the organization (0= No, 1= Yes, 99= NA)
 - viii. use euphemisms (0= No, 1= Yes, 99= NA)
 - ix. discuss money and/or liability (0= No, 1= Yes, 99= NA)
 - x. discuss money and/or responsibility (0= No, 1= Yes, 99= NA)
 - xi. acknowledge an individual's commitment to the flu (0= No, 1= Yes, 99= NA)

- xii. acknowledge an individual's fear (*0= No, 1= Yes, 99= NA*)
- xiii. acknowledge an individual's pain (*0= No, 1= Yes, 99= NA*)
- xiv. acknowledge an individual's suffering (*0= No, 1= Yes, 99= NA*)
- xv. acknowledge an individual's uncertainty (*0= No, 1= Yes, 99= NA*)
- xvi. acknowledge an organization's commitment to the flu (*0= No, 1= Yes, 99= NA*)
- xvii. acknowledge an organization's fear (*0= No, 1= Yes, 99= NA*)
- xxviii. acknowledge an organization's pain (*0= No, 1= Yes, 99= NA*)
- xix. acknowledge an organization's suffering (*0= No, 1= Yes, 99= NA*)
- xx. acknowledge an organization's uncertainty (*0= No, 1= Yes, 99= NA*)
- xxi. minimize the organizations responsibility for the flu (*0= No, 1= Yes, 99= NA*)
- xxii. minimize the perceived damage caused by the flu (*0= No, 1= Yes, 99= NA*)
- xxiii. attempt to make the flu to be not as bad as it seems (*0= No, 1= Yes, 99= NA*)
- xxiv. discuss the past good works of the organization (*0= No, 1= Yes, 99= NA*)
- xxv. discuss the organization as a victim of the flu (*0= No, 1= Yes, 99= NA*)
- xxvi. claim that there are things beyond control that caused the flu (*0= No, 1= Yes, 99= NA*)
- xxvii. accept the current state of the flu but show what else can be done (*0= No, 1= Yes, 99= NA*)
- xxviii. accept the current state of the flu but show nothing else can be done (*0= No, 1= Yes, 99= NA*)
- xxix. suggest that the right thing to do about preventing the flu was not obtainable (*0= No, 1= Yes, 99= NA*)
- xxx. give _____ for what the organization is doing about the flu (*0= actions, 1= reasons, 3= both 4= neither*)
 - 1. are they excuses (*0= No, 1= Yes, 99= NA*)
 - 2. are they justifications (*0= No, 1= Yes, 99= NA*)
 - 3. are they reasonable and fair (*0= No, 1= Yes, 99= NA*)
- xxx. give _____ for what the organization is not doing about the flu (*0= actions, 1= reasons, 3= both 4= neither*)
 - 1. are they excuses (*0= No, 1= Yes, 99= NA*)
 - 2. are they justifications (*0= No, 1= Yes, 99= NA*)
 - 3. are they reasonable and fair (*0= No, 1= Yes, 99= NA*)

C.

Open Category

Researcher comments (What else stood out from this article?)

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