



UNIVERSITI PUTRA MALAYSIA

***MODERATING EFFECT OF KNOWLEDGE ON THE RELATIONSHIP
BETWEEN VALENCE FRAMING OF COVID-19 ONLINE NEWS AND
PREVENTIVE BEHAVIOURS***

JOANNEIA SELIN A/P JOSEPH

FBMK 2022 4



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By

JOANNEIA SELIN A/P JOSEPH

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia, in Fulfilment of the Requirements for the Degree of Master of
Science**

September 2022

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirement for the degree of Master of Science

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Chair : Julia Wirza binti Mohd Zawawi, PhD
Faculty : Modern Languages and Communication

Corona, a newly discovered virus was declared pandemic and considered a global threat to human-being. When it comes to seeking information, the role of media cannot be underestimated because people's need for information increase especially during pandemic and global-health crisis. The way media frame news may influence public's preventive behaviours differently in terms of positive (gain) and negative (loss) framing. This scenario is known as valence framing. Past studies have shown that gain frame enhance preventive behaviours better than loss frame. This research attempts to clarify the valence frame effects of COVID-19 online news towards preventive behaviours while determining the moderating role of knowledge in the relationship. Using a self-administered questionnaire, 150 participants of both undergraduates and postgraduates from Universiti Putra Malaysia participated in a True Experiment based on Pretest-Posttest Control Group procedures. Simple random sampling was used to randomize participants into two treatments (gain and loss) groups and one control group (neutral). All variables were tested for validity and reliability in a pilot study prior to the field data collection. Descriptive analysis, Pearson's Correlation, Multiple Regression and Independent t-test were employed for data analysis. The result show that valence frames had no significant effect to preventive behaviours. Knowledge moderates the relationship. In the means comparison, gain frame enhances better than loss frame in preventive behaviours. Meanwhile, different level of educational background had no significant effect to preventive behaviours. One significant contribution of the research findings is that it has clarified the role of knowledge in the relationship between valence framing effects and preventive behaviours. A participant with higher knowledge on COVID-19 got influence through positive news frame and they practice proper preventive behaviours while navigating a healthy lifestyle. Meanwhile it is also proven that participants exposed to gain frame practice better protective measures compared with those exposed to loss frame. This research is a pertinent input that could be used to ensure good media

framing practice, particularly in identifying which frames work the best in engaging with proper COVID-19 preventive behaviours within public.



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

KESAN PENGETAHUAN SEBAGAI MODERATOR ANTARA HUBUNGAN PEMBINGKAIAN *VALENCE* COVID-19 DALAM TALIAM DAN TINGKAH LAKU PENCEGAHAN

Oleh

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Korona, virus baharu diisytiharkan sebagai pandemik dan dianggap sebagai ancaman global kepada manusia. Peranan media tidak boleh dipandang rendah dalam persoalan memperoleh maklumat kerana keperluan orang ramai untuk info lanjut meningkat terutamanya semasa pandemik dan krisis kesihatan global. Kaedah media merangka berita mampu mempengaruhi tingkah laku pencegahan manusia secara berbeza dari segi pembingkai positiif (keuntungan) dan negatif (kerugian). Senario ini dikenali sebagai pembingkai *valence*. Kajian lepas menunjukkan bahawa bingkai keuntungan meningkatkan tingkah laku pencegahan lebih baik daripada bingkai kerugian. Keseluruhannya, tujuan penyelidikan ini adalah untuk menentukan peranan pengetahuan sebagai moderator dalam perhubungan antara kesan pembingkai *valence* berita COVID-19 dalam talian terhadap tingkah laku pencegahan. Dengan menggunakan kaedah soal selidik, 150 peserta pra dan pasca siswazah dari Universiti Putra Malaysia telah mengambil bahagian dalam Eksperimen Sebenar berdasarkan prosedur Kumpulan Kawalan Praujian-Pasca Ujian. Persampelan rawak mudah digunakan untuk mengasingkan peserta kepada dua kumpulan rawatan (untung dan rugi) dan satu kumpulan kawalan (neutral). Semua pembolehubah telah diuji untuk kesahihan sebelum pengumpulan data lapangan. Analisis deskriptif, Korelasi Pearson, Regresi Pelbagai dan Ujian-t untuk sampel-sampel bebas digunakan untuk penganalisan data. Keputusan menunjukkan bahawa bingkai valensi tidak mempunyai hubungan yang signifikan dengan tingkah laku pencegahan. Pengetahuan berperanan sebagai moderator dalam perhubungan. Dalam perbandingan, bingkai keuntungan memiliki impak yang lebih baik daripada bingkai kerugian. Sementara itu, latar belakang pendidikan yang berbeza juga tidak mempunyai sebarang hubungan yang signifikan dengan tingkah laku pencegahan. Satu sumbangan penting hasil kajian ini menjelaskan peranan pengetahuan dalam perhubungan antara kesan pembingkai *valence* dan tingkah laku pencegahan. Seseorang yang mempunyai pengetahuan lebih tinggi tentang COVID-19 dipengaruhi bingkai

berita positif dan mereka mengamalkan tingkah laku pencegahan yang betul dengan menjalani gaya hidup sihat. Sementara itu, peserta yang terdedah dengan bingkai keuntungan mengamalkan langkah perlindungan yang lebih baik berbanding dengan mereka yang terdedah kepada bingkai kerugian. Penyelidikan ini merupakan input penting yang boleh digunakan untuk memastikan amalan pementakan media yang baik, terutamanya dalam mengenal pasti bingkai mana yang paling berkesan dalam melibatkan diri dengan tingkah laku pencegahan COVID-19 yang betul dalam kalangan orang ramai.



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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

MCO	Movement Control Order
COVID-19	Novel Coronavirus Disease 2019
HBM	Health Belief Model
WHO	World Health Organization
RMCO	Recovery Movement Control Order
SOP	Standard Operating Procedure
UPM	Universiti Putra Malaysia
SPSS	Statistical Package for the Social Sciences

CHAPTER 1

INTRODUCTION

1.1 Introduction

News framing in terms of gains and losses play a vital social element that ensures a properly functioning protective behaviours in the society. This study investigates media framing, especially the relationship between valence framing towards preventive behaviours while considering the possible moderating effect of knowledge in this relationship. This chapter covers the fundamental basis of this research which are the: background of the study, problem statement, research questions, research objectives, significance of study, scope of the study and lastly the definition of key terms. The summarized version of this chapter will enable the reader to interpret and get a glimpse of idea of what this entire research is going to be about. having subheadings.

1.2 Background

In January 2020, the world was shocked by the presence of a new strand of virus that rapidly destroyed lives everywhere regardless of nationality, race, and gender. Severe acute respiratory syndrome (SARS)–CoV-2, or also known as Coronavirus Disease 2019 (COVID-19) has caused a rapidly spreading outbreak centered from China (Layne et al., 2020). Coming from a virus family, the disease causes illness such as high fever, cough, flu and even death for severe cases such as diabetes, chronic illness, cancer, and cardiovascular problems (Shahnazi et al., 2020). The virus is believed to be transmitted through snakes being the intermediate host which hunt for bats. The Wuhan Huanan Wholesale Seafood Market in China is the central point where it all started.

The World Health Organisation (WHO) officially declared the COVID-19 outbreak as a “pandemic” on March 11th, 2020, after a worldwide spread with millions of deaths. The coronavirus has affected more than 200 countries globally, including every edge of all the continents which surpasses a total number of confirmed cases of more than 610 million with a death toll of more than 6.5 million cases as of September 9th, 2022 (Worldometer, n.d.). Table 1 below shows the ten countries with the highest number of COVID-19 cases reported as of September 9th, 2022.

Table 1: Ten Countries with the Highest Number of COVID-19 Cases Reported as of September 9th, 2022

Countries	Total Cases	Total Deaths
United States	96,870,378	1,074,171
India	44,478,636	528,090
France	34,643,240	154,379
Brazil	34,545,816	684,685
Germany	32,386,089	148,098
South Korea	23,864,560	27,313
United Kingdom	23,521,792	188,242
Italy	22,004,612	176,098
Russia	19,908,189	385,069
Japan	19,761,733	41,840

[Adapted from Worldometer (n.d.)]

According to Table 1, the top countries are United States (96,870,378 cases), India (44,478,636 cases), France (34,643,240 cases), Brazil (34,545,816 cases), Germany (32,386,089 cases), South Korea (23,864,560 cases), United Kingdom (23,521,792 cases), Italy (22,004,612 cases), Russia (19,908,189 cases), and Japan (19,761,733 cases). Malaysia is ranked 27th in the world with a total case of 4,797,437 and 36,262 deaths as of 9th September 2022 (Worldometer, n.d.). started.

Malaysia reported its first case on January 24, when three patients suspected to have close contact with a Chinese national from Wuhan test positive for the virus. Sooner, the Malaysian government declared a nation-wide lock down under the Movement Control Order (MCO) starting 18th March 2020, allowing only essential services to continue its operation. This movement has been imposed due to the rise in active cases.

During crucial times like this, information regarding the control of spreading, infectious cases, prevention, preparation, and threat are the important functions of public health and public tend to rely on non-medical sources such as news to collect information (Pieri, 2019). When it comes to seeking information, the role of media cannot be underestimated because people's need for information increase especially during pandemics and global-health crisis (Iwai, 2020; Pieri, 2019; Collinson et al., 2015). The media channels develop the best platform for

public to debate on effects during a crisis (Stephenson & Jamieson, 2009). This is because, media emphasizing different angles and frames may possibly lead to different effects on public's attitudes and behaviours (Ophir, 2018).

Media framing studies are not something new in the context of pandemic or health communication; as it has been widely recognised by scholars especially during this COVID-19 outbreak (Mutua & Ong'ong'a, 2020; Nwakpu et al., 2020; Ogbodo et al., 2020). To be precise, one of the popular framing effect types of research is the valence framing and it's the phenomenon of determining gains and losses in terms determining information in positive or negative (Žeželj et al., 2007). Generally, framing effect can be examined by framing in terms of benefits of practicing a specific behaviour (gains) and faults of not practicing a specific behaviour (losses) (Soofi et al., 2020). In fact, this framing concept is extremely popular in health communication studies of prevention and detection behaviour (Hameleers, 2020) and generally used to examine basic human-related behaviours as well (Gonzalez et al., 2005).

Besides that, another most relatable model in explaining health communicational research is the Health Belief Model (HBM). Health Belief Model is a conceptualised model invented for the study in both psychological and social theory; and well known for its wide usage in behavioural research specially to understand human health-related behaviours (Barakat & Kasemy, 2020; Raamkumar et al., 2020; Jones et al., 2015; Champion & Skinner, 2008). Health Belief Model is constructed with six major components, each used to predict health behaviours: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cue to action and self-efficacy (Barakat & Kasemy, 2020; Champion & Skinner, 2008). The model can be inter-related with framing theory and media framing were seen has a direct impact on their components associating with behavioural change based on past literatures (Raamkumar et al., 2020).

Iwai (2020) reported, approximately 3 billion regular social media users in database were recorded ever since the outbreak and was found keep increasing day by day. Adding on to that, known as a global treat, COVID-19 has received intensive coverage in both the national and international media. Regarding the fact due to high usage of online platform during the ongoing crisis, this research will focus prominently on online news platforms.

This research attempts to clarify the effect of valence framing (gain and loss) of COVID-19 online news towards preventive behaviours. Considering the popular recognition of knowledge as moderators in the study of framing (Arthur, 2018; Lecheler et al., 2009; Feinstein et al., 2006), this research also seeks to examine knowledge as a moderator too.

1.3 Problem Statement

Research on the relationship between valence framing and preventive behaviour has produced inconsistent findings in the past. These inconsistent findings are due to lack of research combining models and theories according to the researcher's database. Apart from that, conducting research after crisis and the changes in data collection every hour also contributes problem to these issues. The reasons are further explained in the paragraph below.

The first issue describes how framing studies failed to include models to study behavioural changes during a crisis as studies involving Health Belief Model are very scant according to the researcher's database. Past literatures show the combination in other disease such as H1N1, Ebola but for COVID-19 is still very scant. The next two issues are crucial because pandemic doesn't provide a proper timeline for study purpose. Most studies made people to visualize a crisis instead of exploring people with real-life setting (Hameelers, 2020). Imagination and reality produce different effects because reality connects more personal than imagination. Besides that, an on-going crisis makes it difficult to obtain an accurate data as the information changes every hour depends on the uncontrolled situation (Hameelers, 2020). So, it is important to update the research progress frequently to match with the current situation so that upcoming researchers can continue the study for the next term accordingly in plan. The current study attempts to tackle these three issues simultaneously.

On another angle, the crisis in Malaysia has often been uncertain and doubtful due to the confusing of do's and don'ts. Media framing during health emergencies is extremely important because poor media framing leads to poor response from public (Thomas et al., 2020). For instance, we encountered huge number of news and headlines on violation of Standard Operating Procedures (SOP) (e.g., fail to practice social distancing, fail to wear masks, improper hygienic) daily in Malaysian media. This raises a question on how to restructure framing pattern in media for a better public understanding. This is because, better risk management procedures during crisis does not only help people's projection for that timeline, but also on the prolonged consequences on health for future use (Vellek, 2016). Hence, the restructuring should mainly observe which frame (positive or negative) is able to educate and raise awareness on health precautionary steps (van Bavel, 2020). To tackle this issue, this current study's outcome will help recommending future efforts for both government and public to how abide pandemic control measures and future prevention practices. As media stands as an asset between the government and public, the outcome of this research will help restructuring a better risk management procedure during pandemic. It aims to investigate the gap between framing and behavioural influence for COVID-19 situation for Malaysian media.

Besides theory and models, another common element that may result in inconsistent findings for this research are due to demographic factors such as (1) "targeted readerships' geographical sketching" (Sualman & Aziz, 2012) and

(2) different knowledge level (Ihaji et al., 2014; Janahi et al., 2011). For the first issue, the representation should not focus on one selective group such as only urban or only rural. Their outcome should be transparent and generalised. For the second issue, knowledge usually do make a change in the population. Different educational background influence health behaviour differently (Ihaji et al., 2014; Janahi et al., 2011). Past literatures have mentioned that one must first understand the instructions, information and messages delivered by the health officials or news media in order to prevent one from disease in which lesser knowledge leads to larger framing effect (Hameleers, 2020; Wang et al., 2018; Lecheler et al., 2009; Chong & Druckman, 2007). Taking note on this, this current research aims to conclude a wider representation of subjects by including students of various educational background level. At the same time, the role of knowledge will be seen as a moderator to observe how their effect moderates the entire relationship.

From the perspective of health communication, Kreps (2020) explained that this kind of research help to balance both health care and health promotion factors by navigating health information regarding prevention, detection and treatments for a better choice. In fact, in the current rapid world, where health information and problems advances rapidly, expansion in health knowledge is important to keep track of new approaches of disease prevention, treatment and diagnose. In parallel to the fact, the current research aims to expand the health knowledge framework wider for COVID-19 by collaborating with health communication models and theories. This will also lead to an expansion in the health field as this research associates with Malaysian media framing structures.

Therefore, this present study shed a better light to improvise the inconsistent findings mentioned above by associating framing theory with Health Belief Model, conducting the research during the on-going crisis and keeping the COVID-19 health research progress on track in terms of its behaviour adoption and prevention processes. Besides, the study also aims to tackle the doubtful framing pattern in Malaysian media to identify how they structure their news in terms of positive and negative to influence the public. Next, to tackle the common elements issues, this study will therefore include a wider representation of study subjects by not including only one selective group, but from different levels like undergraduates and postgraduates. Knowledge will be assessed to see how different educational background influence health behaviours differently and how they moderate the relationship differently. Lastly, from the perspective of health communication, this study will be able to fill in the gap of COVID-19 studies based in Malaysian context by enlarging the scope of study through combination of other theories and external factors.

1.4 Research Questions

Presuming the aforementioned discussion on the research problems above, the research questions will be the following:

1. What is the relationship between valence frames towards preventive behaviour?
2. Does knowledge moderate the relationship between gain frame and loss frame towards preventive behaviour?
3. What is the comparison between gain frame and loss frame?
4. Does educational background affect preventive behaviour differently?

1.5 Research Objectives

Based on the research questions developed from the problem statement evidences, the research objectives are phrased as follows:

General Objective: To investigate the effects of valence frames (gain and loss) on preventive behaviours and the moderating role of knowledge.

Specific Objectives:

1. To investigate the relationship between valence frames towards preventive behaviour
2. To determine how knowledge, moderate the relationship between gain frame and loss frame towards preventive behaviour
3. To compare the differences between gain frame and loss frame
4. To determine how various educational background, affect preventive behaviour differently

1.6 Significance of Study

This research is instrumental because no study has yet examined the effect of valence framing on preventive behaviours especially during COVID-19 within a Malaysian context. The significance of the study can be divided into four terms: (1) theory, (2) method and (3) practical.

In terms of theory, studying news framing impacts possibly helps to widen the understanding of framing theory. Labelled as second level of agenda setting theory at the initial stage, framing theory indeed have expanded so much theoretically throughout these years with research. Yet, lesser research has combined Health Belief Model to explore the framing theory components. Hence, the combination of this model's components to study valence framing will provide another great contribution for exploring framing theory more deeply.

In terms of method, future scholars and researchers may have this study as a form of reference material in conducting similar studies on researching framing effect for pandemic in Malaysia. There is lesser empirical study that has

examined individual-behavioural changes due to “pandemic-framing”, in any form of extant literature in our country. Using multiple data analysis techniques, this research methodologically helps overcome limitations found in other methods more frequently used in Social Science research.

In terms of practical, considering knowledge as a moderator for this study might create a beneficial platform for both government and community. In fact, the government will be able to acknowledge how illiterate society learn and understand facts in their own ways. Through this, they can initiate multiple ways and communication strategies to ensure public with less knowledge understand the disease and safety measures easily through media channels. Even with the literate community, the government may discover which type of framing angles produce effective reach. This research's expansion helps in advance of news gathering practices in various media platforms especially during future crisis in Malaysia. Hence, this research seizes an opportunity for the media practitioners to understand the right news framing methods to avoid future complications within public's misperceptions. The media practitioners able to understand the correct techniques of reporting based on what people tend to look for.

1.7 Scope of Study

This study sought to examine the relationship between valence framing of online news towards preventive behaviours in Malaysia. Due to the country factor, this research is narrowed to only Malaysia, particularly students from Universiti Putra Malaysia (UPM). The on-going restrictions during the pandemic phase ever since the early stage of this research in 2020 create difficulties on focusing too many locations to conduct research. Besides that, this study will not cover any particular timeline. This is based on the premise that the conflict is increasing in occurrence and still going on. However, the end time for this outbreak has not been identified yet since the outbreak and the spread has not completely gone. The study will specifically be focusing only the online media and not the traditional media. This is because public tend to be dependent and reliable on online sources more during the pandemic as discussed previously. This has been mentioned earlier.

1.8 Definition of Key Terms

1.8.1 COVID-19

COVID-19 is a disease outbreak which originated from the district of Wuhan in China, causing illness such as high fever, cough, flu and even death for severe cases. The virus is believed to be transmitted through snakes as the intermediate host which hunt for bats. It was declared as a pandemic and has affect more than 200 countries across the globe (Layne et al., 2020).

1.8.2 Gain Frame

Gain frames can emphasise on achieving positive result and avoiding negative result. Generally, in health communication, gain and loss frames can be constructed by framing either health-promoting behaviours or health-damaging behaviours (Rothman & Salovey, 1997).

1.8.3 Health Belief Model (HBM)

Health Belief Model is a conceptualised model used in behavioural research specially to understand human health-related behaviours (Raamkumar et al., 2020; Jones et al., 2015). It is constructed with six major components, each used to predict health behaviours: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cue to action and self-efficacy (Barakat & Kasemy, 2020; Champion & Skinner, 2008).

1.8.4 Knowledge

Knowledge is a fact that is mixed with occurrences, contents, assumptions, deliberation, insight and innovation. It is a highly extensive and valuable than any facts or data. Generally, knowledge depends on it got attached to an individual and how the person own and utilise it to resolve things in many different ways (Karlsen & Gottschalk, 2004).

1.8.5 Loss Frame

Loss frames can focus more on negative results or avoiding a positive result (both considered losses). Generally, in health communication, gain and loss frames can be constructed by framing either health-promoting behaviours or health-damaging behaviours (Rothman & Salovey, 1997).

1.8.6 Media Framing

Media framing is the central attention from the journalist's own knowledge deciding in shaping and processing news frames into stories. It is a multi-complex process that enables wide spread of delivering messages to a bunch of community continuously which might divert or influence the society's perception. Usually, framing is a cultural process which uses certain symbols, patterns and visuals to influence a reader's mind on which is more important and vice versa (Anggraeni, 2018; Kasim et al., 2018; De Vreese, 2005).

1.8.7 Preventive Behaviour

As for this research, preventive behaviours will be assessed through Health Belief Model based on their six components: perceived susceptibility, perceived severity, perceived benefit, perceived barrier, self-efficacy and cue to action. It is the most relatable model to explain health communication in terms of interpreting preservation of health behaviours and guiding health behaviours involvement as a framework (Louis, 2017).

1.8.8 Valence Framing

Valence framing is the phenomenon of determining gains and losses in terms determining information in positive or negative (Žeželj et al., 2007). Valence framing is also the most popular used concept in health communication to study prevention and detection behaviour and generally used to examine human-related behaviours as well (Hameleers, 2020; Gonzalez et al., 2005).

1.9 Summary

This chapter concludes the basic introduction and background about this research. The general aim of this research is to study the relationship between valence framing of COVID-19 online news towards preventive behaviours. The scope of this research is limited to one public university in Malaysia. Next, chapter two will further evaluate on the literature reviews unlocking theories, models and evidence associating with the current research framework.

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