



# Stay safe or take a risk?

Master thesis about framing the COVID-19 vaccine

Master Thesis (SKOM 12)

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# 1. Introduction

Is COVID-19 vaccination the solution to the pandemic? When "viral pneumonia" was first mentioned on the Wuhan Municipal Health Commission's website on December 31, 2019, the world had no idea what was to come in the months that followed (WHO, 2020). Several days later on January 9, Chinese authorities determined that the outbreak was due to a novel coronavirus. Within two weeks, cases were already being reported in Japan, South Korea, and Thailand (NY Times, 2021). The next major outbreak occurred in Italy, followed later by Iran as the next focus. The so-called COVID-19 virus spread rapidly around the world, putting dozens of countries in a state of emergency. On March 11, WHO made it official, calling the COVID-19 outbreak a pandemic (BBC, 2020). 10 months after the outbreak in Wuhan, more than one million people have already died from the COVID-19 virus (NY Times, 2020).

To stop the spread of the virus, many countries rely on stricter hygiene regulations such as sanitizers and face masks, social distancing such as home offices or homeschooling, or entire lockdowns in which, for example, restaurants, bars and clubs have all been closed. However, these strategies offer mere containment of the virus so as not to collapse the health care system. Governments placed their hopes in the manufactured COVID-19 vaccines, which could potentially put an end to the pandemic. Given the extreme circumstances, the low vaccination willingness in Europe is therefore surprising (ZDF, 2020). A study conducted by the market research institute Ipsos in October concluded that only 54% of people in France, 64% in Spain, 65% in Italy and 69% in Germany would like to be vaccinated against the COVID-19 virus. According to Ipsos, the figures actually decreased compared to the first survey three months earlier. These results are in line with the findings of Imperial College London in November, according to which only 35% of the French, 41% of the Spanish and 50% of the Germans are willing to be vaccinated. However, Imperial College London also notes that these beliefs are often not well established and can be influenced by good communication strategies.

To achieve herd immunity, a country needs an immunization level of 60 percent or more (ZDF, 2020). If vaccination readiness is really as low as the studies by Ipsos and Imperial College London indicate, such a targeted herd immunity is difficult to achieve. However, this is the ultimate goal in order to find a way out of this pandemic as quickly as possible. Otherwise, there is a threat of further complete lockdowns, restrictions on social life, a deeper recession in the economy, job losses, depression, collapses in the health care system, and, most importantly, more COVID-19 victims. However, since these beliefs are not solidified, how governments will address their populations and persuade them to vaccinate is therefore of immense importance.

With a good communication strategy, governments can make their citizens' attitudes and intentions toward COVID-19 vaccination more positive and thus achieve high immunization levels more quickly and bring the pandemic to an end.

According to research, message framing can provide an effective and theoretically based health communication strategy (Rothman, Bartels, Wlaschin & Salovey, 2006, Rothman, Kelly, Hertel & Salovey, 2003, Rothman & Salovey, 1997). Such a communication campaign emphasizes either in terms of the benefits of completing the recommended action (gain frame) or the costs of avoiding the recommended action (loss frame) (Gerend & Shepherd, 2007). Several vaccination studies have already achieved significant results regarding vaccination of H1N1 influenza virus (Nan, Xie & Madden, 2012), MMR (Abhyankar, O'Connor & Lawton, 2008) or HPV (Gerend & Shepherd, 2007). Much of the literature has focused on the relative effectiveness of such gain & loss messages (O'Keefe & Jensen, 2006, Rothman et al., 2006). However, empirical research has found only small differences in message effectiveness between loss and gain frames, and research is now focusing more on identifying potential moderators between framing and message effectiveness (Nan, Xie & Madden, 2012). Moderators such as age, vaccination safety, vaccination effectiveness, perceived outcome efficacy, or perceived severity have been identified (McRee, Reiter, Chantala & Brewer, 2010, Abhyankar, O'Connor & Lawton, 2008, Nan, Xie & Madden, 2012). However, Nan, Xie, and Madden (2012) highlight that more research is needed specifically in vaccination risk communication to identify moderators of gain and loss frames effectiveness.

Due to the high relevance of the research gap regarding the identification of gain & loss frames moderators and the COVID-19 vaccination for countries, the overall research question of this master thesis is: In which way do gain & loss frames influence the attitude towards and the intention to receive a COVID-19 vaccination? Based on framing theory and the Theory of Planned Behavior, three hypotheses are tested using an experiment in a repeated measure design. This study aims to provide new insights into the ways in which countries need to adjust their risk communication and health communication strategies to make attitudes toward and intentions to receive a COVID-19 vaccination more positive. In this way, this work highlights practical implications for countries' COVID-19 vaccination communication strategies and seeks to contribute further to research on identifying moderators of gain and loss frames effectiveness.

## **2. Theory**

## **2.1 COVID-19 Pandemic**

### **2.1.1 Definition of COVID-19**

### **2.1.2 History of the pandemic**

### **2.1.3 COVID-19 restrictions**

### **2.1.4 COVID-19 vaccine**

## **2.2 Framing Theory**

### **2.2.1 Definition of Frames**

Definition von Robert Entman

Frame Building & Frame Setting

Funktionen

Typologien

### **2.2.2 Relevant model studies**

The origin of framing theory is considered to be the works of Bateson (1955, 1972), who first used the term frame in its current understanding in the research literature (Cornelissen & Werner, 2014). The psychiatrist understood frames as psychological concepts and defined the term using the picture frame and Venn diagram from mathematical set theory (Ardèvol-Abreu, 2015). According to Bateson (1955, 1972), a frame serves two functions. First, a frame as a diagram analogy involves elements that are inside the boundaries and excludes those elements that are outside the boundaries (Ardèvol-Abreu, 2015). On the other hand, a frame as a picture frame analogy directs the attention of recipients and emphasizes those elements that are inside the boundaries and ignored those elements that are outside the boundaries. Bateson (1955, 1972) thus emphasized the inclusion and exclusion of information in messages.

As the next milestone, Goffman's work "Frame Analysis" in 1974 helped framing theory make its final breakthrough in the research literature. Based in the field of sociology, Goffman understood frames as social frameworks and mental schemes that people use to organize their experiences (Goffman, 1974, Ardèvol-Abreu, 2015). Frames, he argued, are tools that society can use to construct a shared interpretation of reality. This perspective entailed an expansion of the concept of frame from an individual and psychological to a collective and sociological understanding. With the help of this definition, journalistic news was from then on studied in communication studies, as media collectively can create and modify social frameworks of interpretation by intervening in a social discourse.

From this point on, López-Rabadán and Vicente-Mariño (2009) divided the development of framing theory into three major phases (Ardèvol-Abreu, 2015). They identified the first phase as the period from 1974 to 1990, which was characterized by the first instrumental applications based on the sociological definition of the term. Framing theory slowly entered and grew in communication studies. This phase includes Kahneman and Tversky's (1979) Prospective Theory from behavioral economics, the next milestone of framing theory. Prospective Theory states that presenting the same information in different ways changes people's perceptions, preferences, and actions (Kahneman & Tversky, 1979, Abhanyankar, O'Connor & Lawton, 2008). On the one hand, people are willing to take risks when faced with losses or costs of an action (Nan, Xie & Madden, 2012). On the other hand, people behave risk averse when faced with the factual equivalent gains or benefits of the action.

The best example is the study that became famous as the "asian disease problem", in which Kahneman and Tversky (1981) placed the participants in the imaginary situation in which an Asian disease would kill 600 people. Participants each had to choose between Plan A and Plan B (Nan, Xie & Madden, 2012, Kahnemann & Tversky, 1981). Plan A involved a certain outcome with less risk, while Plan B offered an uncertain outcome with more risk. If the options were gain-framed ("if Program A is adopted, 200 people will be saved," "if Program B is adopted, there is one-third probability that 600 people will be saved and two-thirds probability that no people will be saved"), more participants went for the safer and less risky option A. However, when the options were presented in a loss frame ("if Program A is adopted, 400 people will die", "if Program B is adopted, there is one-third probability that nobody will die and two-thirds probability that 600 people will die"), the participants favored the more risky Plan B. Thanks to Kahnemann and Tversky's results (1979, 1981), the study of gain and loss frames became a central component of framing research in communication science.

López-Rabadán and Vicente-Mariño (2009) cited the 1990s as the second phase,



Rothman & colleagues (2006)

O'Keefe & Jensen 2006, 2007, 2009

### **2.2.3 State of research**

### **2.2.4 Research gaps**

### **2.2.5 Framing Theory and COVID-19**

## **3. Hypotheses and research questions**

### **3.1 Hypothesis 1**

### **3.2 Hypothesis 2**

### **3.3 Hypothesis 3**

## **4. Conception of the study**

### **4.1 Standardized online questionnaire**

### **4.2 Sample**

## **5. Questionnaire development**

### **5.1 Structure of the questionnaire**

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#### **5.2.1 Gain and loss frames**

#### **5.2.2 Intention**

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#### **5.2.6 Perceived vaccine safety**

#### **5.2.7 Perceived vaccine efficacy**

## **6. Pretest**

### **6.1 Sample**

## **6.2 Gain and loss frame**

## **6.3 Intention**

## **6.4 Attitude**

## **6.5 Perceived susceptibility**

## **6.6 Perceived severity**

## **6.7 Perceived vaccine safety**

## **6.8 Perceived vaccine efficacy**

# **7. Scale development**

# **8. Data analysis strategies**

## **8.1 Hypothesis 1**

## **8.2 Hypothesis 2**

## **8.3 Hypothesis 3**

## **9. Data evaluation**

### **9.1 Hypothesis 1**

### **9.2 Hypothesis 2**

### **9.3 Hypothesis 3**

## **10. Interpretation**

### **10.1 Hypothesis 1**

### **10.2 Hypothesis 2**

### **10.3 Hypothesis 3**

## **11. Conclusion and outlook**

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## 13. Appendix