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Investigando o gap atitude-comportamento pelas lentes da pandemia: lições para a gestão pública e social

Investigating the attitude-behavior gap through the lens of pandemic: lessons for public and social management
Investigando la brecha actitud-comportamiento a través del lente de la pandemia: lecciones para la gestión pública y social

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Resumo

Objetivo da pesquisa: Nossa pesquisa busca estudar a lacuna ou *gap* entre atitude e comportamento durante a pandemia. Considerando o comportamento “fique em casa” como positivo, acreditamos que todos os aspectos da atitude seriam desfavoráveis, pois ficar em casa durante a pandemia causou uma série de desconfortos aos cidadãos, o que configura um *gap* atitude-comportamento.

Enquadramento teórico: O *gap* atitude-comportamento é um fenômeno amplamente estudado em psicologia e marketing. A Teoria da Ação Racional (Ajzen & Fishzbein, 1977) postula que o comportamento do indivíduo deriva de sua atitude, logo, quando o comportamento do indivíduo é inconsistente com o que ele pensa ou sente é chamado de *gap* atitude-comportamento. A Teoria da Ação Planejada (Ajzen, 1991) explica que o *gap* atitude-comportamento ocorre com base nas limitações internas ou externas impostas ao indivíduo. No presente estudo, a lacuna atitude-comportamento é trazida para o contexto da pandemia do novo coronavírus.

Metodologia: Desenvolvemos uma pesquisa com 789 cidadãos brasileiros durante a pandemia de COVID-19. Os dados foram analisados por meio de análise fatorial exploratória e estatística descritiva. Com base na análise fatorial confirmatória, quatro fatores foram extraídos da escala de atitude, dos quais dois fatores representam respostas afetivas (ou seja, emoções negativas, preocupação e medo) e dois fatores representam respostas cognitivas (ou seja, segurança e confiança).

Resultados: Os resultados confirmaram a existência do *gap* entre a dimensão afetiva da atitude (emoções negativas, preocupação e medo) e o comportamento positivo “fique em casa”. No entanto, os indivíduos apresentaram atitudes favoráveis relacionadas ao comportamento imposto de ficar em casa quando o foco foi a dimensão cognitiva da atitude, demonstrando uma consistência atitude-comportamento, ou seja, não sendo confirmado o *gap* atitude-comportamento.

Originalidade: A investigação das atitudes em relação ao comportamento “fique em casa” à luz da Teoria da Ação Racional e da Teoria da Ação Planejada, visando identificar um possível *gap* entre as atitudes dos indivíduos e o comportamento obrigatório “fique em casa”.

Contribuições teóricas e práticas: Quanto às implicações gerenciais, a pesquisa mostra a importância da comunicação de governos, autoridades, profissionais e formuladores de políticas para diminuir os sentimentos negativos dos cidadãos e inspirar confiança e segurança na sociedade, principalmente em situações difíceis.

Palavras-chave: Lacuna atitude-comportamento, Pandemia, Covid19.

Abstract

Research objective: Our research seeks to study the gap between attitude and behavior during the COVID-19 pandemic. Considering the stay-at-home behavior as positive, we believed that all aspects of the attitudes would be unfavorable, since staying at home during the pandemic caused a series of discomfort to citizens, which configures an attitude-behavior gap.

Theoretical framework: The attitude-behavior gap is a phenomenon widely studied in psychology and marketing. The Theory of Rational Action (Ajzen & Fishbein, 1977) postulates that the individual's behavior derives from his/her attitude. When the individual's behavior is inconsistent from s/he thinks or feels towards a behavior it is called the attitude-behavior gap. The Theory of Planned Action (Ajzen, 1991) explains the attitude-behavior gap based on the internal or external limitations imposed on the individual. In the present study, the attitude-behavior gap is brought to the context of the new coronavirus pandemic.

Methodology: We have developed a survey with 789 Brazilian citizens during the COVID-19 pandemic. Data were analyzed using exploratory factor analysis and descriptive statistics. Based on confirmatory factor analysis, four factors were extracted from the attitude scale, of which two factors represent affective responses (i.e., negative emotions and worry and fear) and two factors represent cognitive responses (i.e., safety and trust).

Results: The results confirmed the existence of the gap once individuals presented unfavorable attitudes regarding the behavior on an affective basis. However, the individuals showed favorable attitudes related to the imposed behavior to stay-at-home on a cognitive basis, demonstrating an attitude-behavior consistency, and not an attitude-behavior gap.

Originality: The investigation of attitudes towards the “stay at home” behavior in the light of the Theory of Rational Action and the Theory of Planned Action, aiming to identify a possible gap between the attitudes of individuals and the mandatory behavior “stay at home”.

Theoretical and practical contributions: As for managerial implications, the research shows the importance of the communication of governments, authorities, professionals, and policy makers to lower the citizens negative feelings and to inspire trust and safety in the society, especially in hard situations.

Keywords: Attitude-behavior gap, Pandemic, Covid-19.

Resumen

Objetivo de investigación: Nuestra pesquisa busca estudiar a lacuna ou gap entre actitud y comportamiento durante la pandemia. Considerando positivo el comportamiento de “quedarse en casa”, creemos que todos los aspectos de las actitudes serían desfavorables, ya que quedarse en casa durante la pandemia generó una serie de malestares para los ciudadanos, lo que configura una brecha actitud-comportamiento.

Marco teórico: La brecha actitud-comportamiento es un fenómeno ampliamente estudiado en psicología y marketing. La Teoría de la Acción Racional (Ajzen & Fishbein, 1977) postula que el comportamiento de un individuo se deriva de su actitud, por lo que cuando el comportamiento de un individuo es inconsistente con lo que piensa o siente, se denomina brecha actitud-comportamiento. La Teoría de la Acción Planificada (Ajzen, 1991) explica que la brecha actitud-conducta se produce a partir de limitaciones internas o externas impuestas al individuo. En el presente estudio, la brecha actitud-comportamiento se lleva al contexto de la pandemia del nuevo coronavirus.

Metodología: Desarrollamos una encuesta con 789 ciudadanos brasileños durante la pandemia de COVID-19. Los datos se analizaron mediante análisis factorial exploratorio y estadística descriptiva. Con base en el análisis factorial confirmatorio, se extrajeron cuatro factores de la escala de actitud, de los cuales dos factores representan respuestas afectivas (es decir, emociones negativas y preocupación y miedo) y dos factores representan respuestas cognitivas (es decir, seguridad y confianza).

Resultados: Los resultados confirmaron la existencia de la brecha entre la dimensión afectiva de la actitud (emociones negativas, preocupación y miedo) y la conducta positiva “quedarse en casa”. Sin embargo, los individuos mostraron actitudes favorables relacionadas con la conducta impuesta de quedarse en casa cuando el foco era la dimensión cognitiva de la actitud, demostrando una consistencia actitud-conducta, o sea, la brecha actitud-conducta no fue confirmada.

Originalidad: La investigación de las actitudes hacia el comportamiento de “quedarse en casa” a la luz de la Teoría de la Acción Racional y la Teoría de la Acción Planificada, con el objetivo de identificar una posible brecha entre las actitudes de los individuos y el comportamiento obligatorio “quedarse en casa”.

Aportes teóricos y prácticos: En cuanto a las implicaciones gerenciales, la investigación muestra la importancia de la comunicación de gobiernos, autoridades, profesionales y hacedores de políticas para reducir los sentimientos negativos de los ciudadanos e inspirar confianza y seguridad en la sociedad, especialmente en situaciones difíciles.

Palabras clave: Brecha actitud-comportamiento, Pandemia, COVID-19.

1 Introduction

Although the Theory of Rational Action (Ajzen & Fishbein, 1977) postulates that the individual's behavior derives from his/her attitude, past studies show that the individual sometimes behaves differently than s/he thinks or feels (i.e., attitude) towards a behavior (McNeill & Moore, 2015; Redondo & Puelles, 2017). This inconsistency is called the **attitude-behavior gap**. The attitude-behavior gap is also pointed out by the Theory of Planned Action (Ajzen, 1991) as the result of the individual's lack of perceived control over his/her own behavior, due to limitations that are imposed on him, whether internal (such as skills, knowledge, and planning) or external (time, opportunity, and dependence on third parties).

In the present study, the attitude-behavior gap is brought to the context of the new coronavirus pandemic. In 2020, the world was caught off guard by the new coronavirus (SarsCov-2), and all countries have been reached without distinction by this virus (He & Harris, 2020), marking the beginning of a global pandemic in early March of 2020 (Eryarsoy, et al., 2021). At that time, governments have been challenged, and all societies have experienced social distancing to avoid the severe illness caused by the new coronavirus, called as COVID-19 (Silva et al., 2020; Sharma et al., 2021). Based on the World Health Organization report, Ranjbari et al. (2021) states that the United States of America was the most affected country by the COVID-19 pandemic in the world, followed by India and Brazil by October 3, 2020. In Brazil, the first case of COVID-19 was detected in São Paulo, on February 26, 2020, and then the new coronavirus quickly spread across the country (Zhang et al., 2021).

To curb the spread of the COVID-19, governments reacted using interventions such as social distancing and lockdowns (Ali & Alharbi, 2020; Boyle et al., 2022; Benke et al., 2020; Wilder-Smith & Freedman, 2020). In cities where lockdown took place, people were oriented not to leave their homes except for essential activities (e.g., pharmacy, hospital, and supermarket) (Aquino et al., 2020). People had to live with less physical and social interaction once governments enacted measures to encourage society to engage in social distancing to reduce the COVID-19 spread (Pedersen & Favero, 2020).

In the context of the pandemic, the cooperation between government and society, and the compliance regarding government's recommendations and the individual's behavior in favor of the population's well-being are relevant themes in current research (Barari et al., 2020; Pedersen & Favero, 2020). However, if individual's behavior derives from his/her attitude (Ajzen & Fishbein, 1977), in the COVID-19 pandemic attitudes might represent how the individual responds to compliance with sanitary measures. According to Ajzen (1989: 241), attitude is “an individual's disposition to respond favorably or unfavorably to an object, person, institution, or event, or to any other discriminable aspect of the individual's world”.

During the pandemic, individuals have experienced negative attitudes such as fear, affliction, anxiety and, in many cases, depression (Barari et al., 2020; Goularte et al., 2021; Kim & Jung, 2020). We argue that some of these negative attitudes may be due to the situation they are subject to, in which a stay-at-home behavior is expected to comply with the social distancing measures enacted by the government. Therefore, an individual may even feel bad about the enacted measures of lockdown or curfew, or even be against it for other reasons, but s/he respects and complies with them.

Thus, the research question of the present study is: Which are the people attitudes related to the stay-at-home behavior during the Covid-19 pandemic? Thus, our study seeks to identify if behind the good behavior (stay-at-home) there were bad feelings. To do so, we considered the context of lockdown during the COVID-19 pandemic to verify the individuals' (negative) attitude related lockdown compliance (positive) behavior.

The present research was based on the work of Fhanér & Hane (1974), entitled “Seat Belts: Relations Between Beliefs, Attitude, and Use” and Fhanér & Hane (1979) “Seat Belts: Opinion Effects of Law-Induced Use” conducted in Sweden to investigate the individuals' attitudes and behaviors in relation to wearing a safety belt. The authors carried out longitudinal research with 368 people, in 1971 and 1976, and found a large change concerning the experience of discomfort and inconvenience to those who had started to use the seat belts when the law was enacted, whereas the consistent nonusers showed more

negative attitudes in 1976 than they had shown in 1971. They observed an inverse action, the imposed behavior changing the attitude, helping us to understand the situation of pandemic we are investigating.

The research was developed in the municipality of Fortaleza, Ceará, Northeastern Brazil, whose choice is justified because of the strict containment measures established by the State Government, through the promulgation of the Decree 33,574, establishing the lockdown at the time of the research, May, 2020 (Decreto N. 33.574, 2020).

The present research may bring theoretical and managerial contributions. In theoretical terms, it contributes to the classical Theory of Planned Behavior (Ajzen, 1989) bringing the application of the theory in a pandemic situation, what is rare in the humanity history. In terms of management, the implications are in both public and private decisions. By understanding the dynamics between citizens' attitudes and behaviors, public managers can devise strategies to influence how people should act, although facing negative attitudes, that can even be changed. It can also promote a collaborative position between society and government, enhancing the role of civil society in solving collective problems, such as the COVID-19 pandemic.

In private decisions, the gap can help the planning of companies' advertising messages, especially when the product or service is something that the consumer must use (e.g. seatbelt, helmet, masks), but does not yet see value in it.

The following is an approach to the attitude-behavior gap and the generation of the research hypothesis; the Covid-19 in the world and specifically in Brazil; the research methodology; the discussion of the results; and finally, the research conclusions.

2 Literature Review

2.1 The Attitude-Behavior Gap

Theory in consumer attitude argues that individuals behave in ways consistent with their attitudes (Gupta & Ogden, 2009), but attitude-behavior inconsistency has attracted many research. In psychology, the bridge between statements and actions is termed as attitude-behavior gap or attitude-behavior inconsistency because, although is expected that attitude predicts behavior, studies on attitudes have discovered the attitude's poor ability to predict behavior, especially when we consider a general attitude towards a specific behavior (Byrka, 2009).

The Theory of Reasoned Action – TRA (Ajzen & Fishbein, 1977) and the Theory of Planned Behavior - TPB (Ajzen, 1991) state that attitude generates intention of acting and they need to be compatible with behavior. According to the TPB, human behavior is guided by three kinds of considerations: beliefs about the likely consequences of the behavior (behavioral beliefs), that produce a favorable or unfavorable attitude toward the behavior; beliefs about the normative expectations of others (normative beliefs), that result in perceived social pressure or subjective norm, and beliefs about the presence of factors that may facilitate or impede performance of the behavior (control beliefs), that give rise to perceived behavioral control or self-efficacy (Bosnjak, Ajzen, & Schmidt, 2020).

Attitude is a predisposition related to some object, while intention describes the people's willingness to undertake certain actions in the direction of that object (Ajzen & Fishbein, 1977). Attitude can also be conceptualized as a favorable or unfavorable response that someone has towards an object, person, institution, or event (Ajzen, 1989). Ajzen (1989) argues that attitude is a hypothetical element and often inaccessible through direct observation. It can be measured based on responses in relation to the object, whether they are negative or positive evaluations. Then, the author approach attitude from a multi-component perspective and present three different types of responses to infer about attitudes: cognitive, affective, and conative.

Cognitive responses reflect perceptions and information about the attitude object; affective responses refer to feelings regarding the attitude object; and conative responses are behavioral inclinations, intentions, commitments, and actions in relation to the object of attitude (Ajzen, 1989). These responses

form the attitude that becomes behavior. In our study, conative responses are not considered, since we do not assess behavioral inclinations or intentions, but the actual behavior of staying-at-home, that was compulsory. Thus, we assume that the attitude, in this case, is formed by the cognitive and affective responses that result in the lockdown compliance behavior. The attitude, its components, and the association with behavior, adapted to this research context, are presented in the theoretical framework (Figure 1):



Figure 1: Theoretical framework
Source: Elaborated by the authors based on Ajzen (1989).

To the TPB, the effects of attitude toward the behavior and subjective norm on intention are moderated by perception of behavioral control (Bosnjak, Ajzen, & Schmidt, 2020), that is, although one has positive attitude and intention to act in a certain way, s/he can or can't do it depending on the available condition of the ambience. So, other variables seem to be relevant in explaining the attitude-behavior relation. These variables can be divided into four categories: personal characteristics (e.g., personality and self-concept, gender, age and stage of life and lifestyle); situational characteristics (e.g., social norms, time, reason for the action, mood or economic constraints); psychological factors (motivation, perception, learning and attitudes), or societal factors (culture, subcultures, social class, reference groups and opinion leaders, and family) (Campos et al., 2016; Tarfaoui & Zkim, 2017; Armstrong et. al, 2014).

Strack and Deutsch (2008) state that the assumption that 'human beings do what they believe is good for them' is the foundation of the most widespread explanations regarding the causes of human behavior. The authors also say that, although people are construed as "rational animals" capable of recognizing the value or utility of their actions, they do not always act this way; that is, under certain circumstances, people behave in ways that do not reflect their values.

The Theory of Cognitive Dissonance (Festinger, 1975) states that the inconsistency between attitude and behavior generates psychological discomfort that, in turn, will motivate the person to reduce dissonance and achieve consonance. Andrade (2019) argues that people want to be consistent in their attitudes, opinions, beliefs, and behavior. Nobody wants contradictory and inconsistent positions, which leaves individuals in an uncomfortable situation, causing them to act trying to maintain the coherence between their convictions and attitudes.

As COVID-19 cases surge around the world, public health authorities are looking for effective strategies to influence individuals to follow COVID-19 prevention guidelines, however, limited empirical research was conducted to identify the factors behind individuals' compliance with COVID-19 prevention guidelines ((Shanka and Kotecho, 2023).

A study conducted in China, using the TPB theory, found a positive attitude to the COVID-19 vaccine but the subjective norm and perceived behavioral control were not significant predictors for the intentions toward COVID-19 vaccination uptake, as it was expected (Fan et al, 2021). Related to the perceived control, the authors suppose that this is due to the fact the study's participants were university students, a population that has a lower priority in COVID-19 vaccination uptake, and related to the subjective

norms, the authors consider the possibility of participants have already made up their own mind in relation to their personal intention toward COVID-19 vaccination uptake (Fan et al, 2021).

Still, based on TPB model, Pan and Liu (2022) analyzed factors that affect airline passengers' intention to wear a mask when flying during the COVID-19 pandemic, and found that attitude, risk avoidance, descriptive norms, and information seeking were significant determinants of the intention to wear a mask in the aircraft cabin, but the attitude had the strongest impact, followed by risk avoidance. Additionally, it was found that the behaviors of others to wear a mask (descriptive norms) motivated the air traveler to wear a mask when flying during COVID-19 (Pan and Liu, 2022).

In our study, we argue that there is also a gap between the attitude and the behavior stay-at-home. As a voluntary, preventive health behavior, the Theory of Planned Behavior (TPB) may provide a useful framework for predicting compliance with social distancing (Gibson et al, 2021). We advocate that, during the pandemic, people behave in a right way obeying the law to stay-at-home with negative feelings, such as fear, anger, sadness, anxiety, depression, and so on. Thus, people may not be comfortable with the social distancing measures enacted by the government, but they comply with it anyway. Barbera and Ajzen (2020) suggest that people seem to be more motivated to comply with the perceived normative expectations and behaviors of important social referents only when PBC is relatively low.

So, we believe that although the behavior regarding lockdown compliance is positive, the attitudes (affective and cognitive dimensions) towards this behavior are negative, what generates a gap, and our research hypotheses are:

H1: The affective responses related to the stay-at-home behavior during the pandemic are negative.

H2: The cognitive responses related to the stay-at-home behavior during the pandemic are negative.

The Fhanér & Hane's research - Seat Belts: Relations Between Beliefs, Attitude, and Use (1974) and Seat Belts: Opinion Effects of Law-Induced Use (1979), that inspired ours, showed that the positive behave of using seat belt, imposed by law, was preceded by negative attitudes like discomfort, worry, risk, effect, and inconvenience. The concerns about the effectiveness of seat belts to prevent personal injury in collisions, pointed out by Fhanér and Hane (1974) can be compared to the discomfort of the situation people was feeling during the lockdown imposed by authorities, to reduce the spread the disease of COVID-19. That's the assumption that inspired our hypothesis.

2.2 COVID-19 Worldwide and in Brazil

The COVID-19 pandemic brought public health challenges to government and highlighted the need for behaviors to comply with the proposed measures of government for the society (Atalan, 2020; Barari et al., 2020; Benke et al., 2020; Silva et al., 2020; Pfattheicher et al., 2020). Hygienic measures, such as avoidance of handshakes (Ali & Alharbi, 2020), adoption of alcohol gel for hand hygiene, and wearing of face masks (Barari et al., 2020), called nonpharmaceutical interventions (NPIs) (Gibson et al, 2021), were the first measures encouraged and adopted.

In addition, other NPIs measures such as isolation, quarantining and social distancing (Benke et al., 2020; Wilder-Smith & Freedman, 2020) have been adopted: (i) isolation is a measure that aims to separate people who are ill from uninfected individuals to reduce the risk of transmission of the disease; (ii) quarantining aims to restrict the movement of individuals supposedly exposed to a contagious disease but who are not ill yet (e.g., in incubation period or asymptomatic), and (iii) social distancing consists of measures that reduce interactions within a community (e.g., the closure of schools and workplaces, or of certain businesses) (Aquino et al., 2020). The adoption of curfew imposed is also an alternative measure, when the authorities determine a time that people must go back home (Barari et al., 2020).

Lockdown is the extreme case of social distancing, in which "a rigorous intervention is applied to an entire community, city or region by forbidding people to leave their homes except to purchase basic supplies or to access emergency services" (Aquino et al., 2020: 2426) as well as avoiding large crowds and crowded spaces (Gibson et al, 2021). Atalan (2020) analyzed the effect of lockdown days on the spread of coronavirus in countries and showed that it was significantly reduced by this measure. Similarly, the study

by Alfano and Ercolano (2020) showed the reduction effect in the countries that implemented it, compared with those countries that did not, specifically 10 days after the implementation of this measure.

COVID-19 lockdowns were adopted by governments throughout the world since the beginning of the pandemic in 2020. This social distancing measure was adopted in Brazil (Bezerra et al., 2020), following the autonomy granted to different governmental spheres (federal, state, and municipal) to decide on different measures to combat the pandemic in accordance with the Brazilian Supreme Court (Supremo Tribunal Federal, 2020). The State of Ceará, where the research was carried out, implemented the lockdown in Fortaleza, its capital, on May 8, 2020 (DECRETO N. 33.574, 2020).

It is worth mentioning that psychological distress is one of the main issues triggered by the COVID-19 pandemic worldwide (Kim & Jung, 2020). High levels of anxiety and stress in the population have been both observed and reported, particularly amongst vulnerable groups (Barari et al., 2020). Another psychological aspect of the COVID-19 pandemic that has been triggered in people is fear. Pakpour & Griffiths (2020) suggest that the population's level of fear should be assessed to see how this emotion can be incorporated by government into its preventive programs in this context. In this direction, Harper et al. (2020) verified that the fear of COVID-19 is a predictor of positive behavior during the pandemic regarding the improvement of hand hygiene measures and social distance compliance, having a functional role in this context.

In Brazil, those negative effects are not different. A study shows that anxiety, depression, anger, somatic symptoms and sleep problems were the most common symptoms of the negative impact of the COVID-19 pandemic on the mental health of the Brazilian population (Goularte et al., 2021). The One Year of COVID-19 study, carried out by the research institute Ipsos (Calliari & Junqueira, 2021) for the World Economic Forum with 30 countries, found that 53% of people interviewed in Brazil believe that their mental health has changed for the worse since the beginning of the COVID-19 crisis. Brazilian indices place the nation in fifth place, out of 30, among those that have most felt the consequences of the pandemic on their emotional well-being: Turkey (61%), Chile (56%), Hungary (56%), Italy (53%) and Brazil (53%).

The survey Tracking the Coronavirus, also conducted by Ipsos (Calliari, 2020), weekly with respondents from 15 nations, shows Brazil in the ranking of the least optimistic with the measure of lockdown to reduce the virus spread (Calliari, 2020). However, another study in Brazil (da Silva et al., 2021) showed that trust in government through messaging, recommendations, or mandatory measures positively affects citizens' behavior related to social isolation.

Despite the evidence that maintaining physical distance from others effectively mitigates community-based spread of COVID-19, identifying the psychosocial factors associated with adherence to social distancing measures is essential, not only for controlling the COVID-19 pandemic, but also to informing strategies for responding to future pandemics (Gibson, 2021). Targeting individuals' attitudes, norms, and PBC may effectively promote protective behaviors intended to mitigate the spread of COVID-19 and similar viral outbreaks

Our research methodology is explained as follows.

3 Methods

3.1 Sample and Data Collection

This descriptive cross-sectional study with a quantitative approach was conducted through a survey in May and June 2020. The sample was composed of Brazilian citizens who lived in Fortaleza, Ceará, and were in quarantine due to the pandemic caused by COVID-19. At the beginning of the questionnaire there was a filter question asking whether the person had to go out to work during the lockdown period. If yes, the questionnaire was ended. After the participants marked their acceptance to participate, they freely answered the questionnaire without any monetary compensation or gift.

The survey was applied online with the use of Google Forms and spread through social networks, specially, WhatsApp. The sampling technique was convenience and cumulative snowball, therefore, non-probabilistic. A total of 789 responses were validated.

Data collection was performed using a questionnaire divided into two parts. The first part served to measure citizens' attitudes and the second part comprised questions about the respondent's sociodemographic characteristics. Since our research is not based on the physiological response or physically visible behaviors that an emotion might trigger, for our purposes, the original self-filed questionnaire was in English, and we followed the classical back translation method, by an American teacher bilingual, to avoid any potential meaning differences arising between original and translated version of the questionnaire, when applied in Portuguese to Brazilians. Moreover, we have chosen in the scale the items of feelings that had to do with the stay-at-home situation, excluding those items directed related exclusively to driving or to safety belt using.

3.2 Attitudes and Behavior Measures

The attitudes were measured using a scale based on the study by Fhanér and Hane (1974). The items of the scale were adapted for the context of lockdown compliance during the COVID-19 pandemic. A Likert-type scale from 1 (strongly disagree) to 5 (strongly agree) was used. Before each item on the scale, the following prefix was added: "How do you feel about having to stay-at-home in social isolation during quarantine (lockdown) because of Covid-19?". The Table 1 shows the items used to measure the attitudes regarding lockdown compliance. In SPSS, version 20, the items representing reverse ideas were coded as they are marked in the Table 1, where AF is affective and CG cognitive dimensions of the attitude.

Table 1
Items on the attitudes and behavior scale

Code	Affective statements
AF1	I feel confined.
AF2	I feel irritated.
AF3	I feel suffocated.
AF4	I feel uncomfortable.
AF5	I feel nervous.
AF6	I feel anxious about not knowing how long I will have to stay-at-home.
AF7	I feel anxious about my financial situation.
AF8	I am afraid of getting sick even though I am at home.
Code	Cognitive statements
CG1	I feel safe to avoid infecting people with the virus.
CG2	I feel worried because I know the risk of the virus.
CG3	I feel safe to avoid being infected by the virus.
CG4	I feel worried that I'm not working/studying.
CG5	I think it is unnecessary because it is not proven that staying at home avoids contagion.
CG6	I feel protected from the disease.
CG7	I think it is absurd because people exaggerate the risk of the virus. ^(r)
CG8	I feel impaired in my right to come and go. ^(r)
CG9	I feel unproductive, even though I am working/studying at home. ^(r)

Source: the survey.

Note. ^(r) It indicates that the items present reverse ideas. Source: Adapted from Fhanér and Hane (1974).

The behavior regarding lockdown compliance was measured based on the definition given by Aquino et al. (2020). The authors define lockdown as a rigorous intervention in which a group of people is forbidden to leave home except to purchase basic supplies or to access emergency services. The State Government of Ceará has implemented a series of measures to control people's circulation and the social distancing to reduce the contagion by the coronavirus. These measures advanced as cases increased in the state, culminating in the implementation of the lockdown. Fortaleza was one of the municipalities that suffered most the consequences of the strictest isolation measures, and the State Government of Ceará, following

the recommendations of the health agencies, implemented the lockdown in Fortaleza through the Decree 33,574 (Decreto N. 33.574, 2020).

3.3 Data Analysis

Regarding data analysis procedures, Exploratory Factor Analysis (EFA) and descriptive statistics were used, according to Hair Jr et al. (2009). The EFA was used to analyze the attitudes regarding the stay-at-home behavior, and the descriptive statistics served to highlight the characteristics of the sample and to analyze the individuals' attitudes

4 Results

4.1 Respondents' Profile

The sample comprises individuals, mostly female (65.78%), who do not have children (49.30%) and do not live with elderly people (68.82%). The average age of the respondents was 40, with most individuals being 38 years old or less (50.57%). In addition, most individuals were not diagnosed or had no symptoms for COVID-19 as of the survey date (84.62%). Regarding occupation, 26.49% of respondents work in the private sector and 26.36% in the public sector, the others are divided into entrepreneurs and self-employed (19.77%), students (14.20%), retired people (7.22%), and unemployed (5.96%). Regarding education, there was a high number of individuals with bachelor studies, concluded or in progress (92.65%). Regarding income, 25.10% of respondents have an income of up to R\$3,000.00 (three thousand reais).

4.2 Descriptive Statistics and Exploratory Factor Analysis

First, a descriptive statistic was carried out with the attitude items and the unique behavior, as seen in Table 2. The descriptive statistic describes the basic features of the data and provides a summary about the sample and the measures.

Table 2
Descriptive statistics – Attitude and Behavior items

Items	N	Mean	Std. error mean	Standard deviation	Skewness	Kurtosis
AF1	789	3.28	0.05	1.33	-0.39	-1.08
AF2	789	2.81	0.05	1.27	0.09	-1.17
AF3	789	2.75	0.05	1.33	0.17	-1.23
AF4	789	2.89	0.05	1.31	0.05	-1.26
AF5	789	2.88	0.05	1.28	0.04	-1.17
AF6	789	3.60	0.05	1.31	-0.69	-0.72
AF7	789	3.05	0.05	1.43	-0.07	-1.36
AF8	789	3.39	0.04	1.26	-0.51	-0.83
CG1	789	3.88	0.04	1.14	-1.00	0.27
CG2	789	3.98	0.04	0.99	-1.20	1.31
CG3	789	3.66	0.04	1.23	-0.74	-0.45
CG4	789	2.80	0.05	1.41	0.15	-1.29
CG5	789	1.74	0.04	1.15	1.59	1.55
CG6	789	2.96	0.04	1.22	-0.08	-1.02
CG7	789	1.64	0.04	1.03	1.69	2.15
CG8	789	2.16	0.05	1.35	0.86	-0.61
CG9	789	3.01	0.05	1.42	-0.09	-1.37

Source: the survey.

Next, an EFA was carried out with all scale items to verify the values of commonalities and factor loadings. Items with commonality and factorial loads below 0.5 were excluded, as suggested by Hair et al. (2009). Based on this criterion, items AF7, CG4, and CG9 were excluded. Subsequently, a new EFA was performed to verify the grouping of the items after the scale's purification, and the KMO and Bartlett tests

were conducted. Cronbach's alpha was used to check the reliability of the data, in which 0.6 or greater values are considered adequate (Hair et al. 2009). The EFA results are presented in Table 3.

Table 3
Exploratory factor analysis – attitudes scale

	Factors			
	1	2	3	4
Negative Emotions ($\alpha = 0.910$) (Affective statements)				
AF3. I feel suffocated.	0.871	-0.147	0.104	0.012
AF2. I feel irritated.	0.848	-0.157	0.094	0.035
AF5. I feel nervous.	0.835	-0.099	0.036	0.118
AF4. I feel uncomfortable.	0.803	-0.135	0.174	0.029
AF1. I feel confined.	0.784	-0.018	0.124	0.036
AF6. I feel anxious about not knowing how long I will have to stay-at-home.	0.758	0.088	0.097	0.170
Safety ($\alpha = 0.807$) (Cognitive statements)				
CG3. I feel safe to avoid being infected by the virus.	-0.118	0.860	-0.150	0.130
CG1. I feel safe to avoid infecting people with the virus.	-0.086	0.851	-0.214	0.189
CG6. I feel protected from the disease.	-0.093	0.753	-0.129	-0.137
Trust ($\alpha = 0.819$) (Cognitive statements)				
CG7. I think it is absurd because people exaggerate the risk of the virus. ^(t)	0.044	-0.147	0.853	-0.128
CG5. I think it is unnecessary because it is not proven that staying at home avoids contagion. ^(t)	0.137	-0.208	0.827	-0.082
CG8. I feel impaired in my right to come and go. ^(t)	0.288	-0.143	0.798	-0.040
Worry and Fear ($\alpha = 0.643$) (Affective statements)				
AF8. I am afraid of getting sick even though I am at home.	0.157	-0.094	-0.051	0.871
CG2. I feel worried because I know the risk of the virus.	0.092	0.261	-0.187	0.793

Note^(t) It indicates that the items present reverse ideas. Base: 789 respondents. Source: research data.
Source: the survey.

The items were grouped into four factors that explain 73.07% of the variance of the construct, as shown in Table 3. The KMO obtained was equal to 0.855 and the Bartlett test presented statistical significance at the level of 1% (p-value < 0.01), indicating adequate correlation between the items.

The first factor gathers negative feelings: suffocated, irritated, nervous, uncomfortable, confined. According to Elfенbein (2007), after exposure to a stimulus, a human perceives a state of feeling that results in the person displaying externally visible behavior or emotional output. In research about mask-wearing in COVID-19 inside the airplanes, Pan and Liu (2021) found that disagreement existed in the US regarding it. In our research, we call this first factor “Negative Emotions”. As general rule, the more favorable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behavior in question (Bosnjak, Ajzen, & Schmidt, 2020). Based on that, we could say that the lower the perceived control, the weaker should be the person's intention to perform the behavior in question.

The second and the third factors are related to cognitive statements. The second factor (feel safe and protected) we named “Safety” for being related to the individual's belief in the social isolation benefits, making them feel protected against the danger of coronavirus. The third factor is an attitude which consists of items that express doubtful thoughts about the reality of the pandemic and the risk associated with the virus; however, we discuss it from the perspective of trust, since the items that form this factor express reverse ideas, so this factor was named “Trust”, the trust on the efficacy of the social isolation measure.

Finally, the fourth factor, also affective (afraid and worried), unexpectedly brings a cognitive statement: I feel worried because I know the risk of the virus. We interpreted this fact as the expression “feel worried” being stronger than the phrase “I know the risk of the virus”, mainly because, at the time, people did not know much about the virus. So, we call the factor “Worry and Fear” that the respondent has in relation to the disease. Fear is the emotion expressed when threat or danger is present; anticipation of a misfortune (Lee & Andrade, 2014), and worry is an uneasy state of mind about the possibility of anticipated trouble

(Paech et al., 2015). Beaudry & Pinsonneault (2010) classify fear and worry as deterrence emotions, experienced in the presence or threat of danger (Hornung & Smolnik, 2021). In our research, the danger comes from the pandemic, an exogenous factor.

In the Table 4 are the descriptive statistic of each group of attitudes and the unique behavior. These descriptive statistics can provide better understanding regarding attitude-behavior relation.

Table 4
Descriptive statistics – Attitude and behavior

Variables	N	Mean	Std, error mean	Standard deviation	Skewness	Kurtosis
Negative Emotions	789	3.04	0.04	1.08	-0.13	-0.82
Safety	789	3.50	0.04	1.02	-0.65	-0.13
Trust	789	4.15	0.04	1.02	-1.25	0.79
Worry and Fear	789	3.10	0.04	1.05	-0.05	-0.59

Source: the survey.

Cronbach's alpha values demonstrated reliability for all factors extracted from EFA.

5 Discussion

Concerning the "Negative Emotions" factor, we found that people presented negative emotions regarding the stay-at-home behavior (i.e., suffocated, irritated, nervous, uncomfortable, confined, anxious). It's a psychological impairment for the inconsistency between attitude and behavior (i.e., negative attitude leading to positive behavior), configuring an attitude-behavior gap. It is important to note that compulsory staying at home represented, for many, compulsory teleworking. Velasco et al. (2023) identified compulsory telecommuting as a major source of overload, especially for men and women with children. According to the authors, women and men with children perceive that they are more interrupted during the execution of their activities, who have greater difficulty reconciling personal, professional and leisure life in compulsory teleworking (Velasco et al., 2023).

As for the "Worry and Fear" factor, it was found that individuals feel worried and afraid of the disease even when they perform the stay-at-home behavior. In other words, even staying at home, individuals develop feelings of fear in relation to the virus (Pakpour & Griffiths, 2020) and in relation to the economics consequences of the lockdown, since many people lost their jobs (Costa, 2020). However, Harper et al. (2020) argue that fear leads to compliance with sanitary measures against COVID-19. The authors discuss about "functional fear", that is, even though it is a negative feeling (attitude), it leads to a positive behavior. It also configures an attitude-behavior gap.

Thus, when developing a non-rational attitude, based on affective components (feelings and emotions), the individual tends to form an inconsistent behavior with his/her attitude, but positive from a behavioral point of view. As postulated by Barbera and Ajzen (2020), people seem to be more motivated to comply with the perceived normative expectations and behaviors of important social referents only when PBC is relatively low. For example, in the longitudinal research of Gibson et al. (2021), participants' intentions increased over time, but social distancing behavior decreased, given that most statewide stay-at-home orders had been lifted by this time. Pan and Liu (2022), that found that attitude had the strongest impact on passengers' intention to wear a mask when flying during the COVID-19 pandemic, also found that younger people and frequent travelers during COVID-19 were willing to pay larger amounts to switch to an airline with a non-mask mandate.

So, we would take the risk to affirm that the worse the people feel with the pandemic, the more they would comply with the government's imposition, maybe for being afraid of the consequences of disobeying them. However, if they perceive the control on the behavior, they will behave in a different way.

Overall, based on the findings, our first research hypothesis (H1: The affective responses related to stay-at-home behavior during the pandemic are negative) was supported.

With respect to the “trust” factor, individuals presented a favorable attitude regarding the stay-at-home behavior once they seem to trust the authorities’ recommendations and are aware about the severity of the virus and its contagion potential. Based on this, trust is a positive attitude consistent to the positive behavior, reflecting a consistency between attitude and behavior.

Gibson (2021) found that older people were more likely to follow through with their intentions to social distance, and that race was a significant moderator of this relationship, with non-White participants displaying a greater intention–behavior gap than White participants (may be driven, in part, by racial disparities in the ability to telework). Research, conducted by da Silva et al., (2021) found that, if the individual develops the perception of trust in the government’s recommendations regarding the fight against the pandemic with lockdown (an exogenous factor), s/he tends to comply with social isolation measures more strictly, what is aligned with our findings.

Regarding the “Safety” factor, the individual knows that staying at home reduces the risk of infecting and being infected by the virus. So, when there is uncertainty about the outcomes regarding the person's actions, s/he tends to develop a perception of risk (Pantano et al., 2021). It seems that the person is aware that staying at home is the correct way to protect himself and others from the disease. This line of thought represents a cognitive response of the attitude that generates an adequate behavior. Thus, the safer s/he thinks s/he is, the more s/he behaves as expected by the government in relation to the enacted measure.

This result signals that, when rationalizing, people configure a behavior consistent with their attitude, what is aligned with previous literature that suggests that individuals tend to seek attitude-behavior consistency (Festinger, 1975; Ajzen & Fishbein, 1977; Ajzen, 1991; Gupta & Ogden, 2009; Andrade, 2019; Barbera and Ajzen (2020; Bosnjak, Ajzen, & Schmidt, 2020). So, our second hypothesis (H2: The cognitive responses related to stay-at-home behavior during the pandemic are negative) is not supported. In figure 2, the framework with the results is presented.

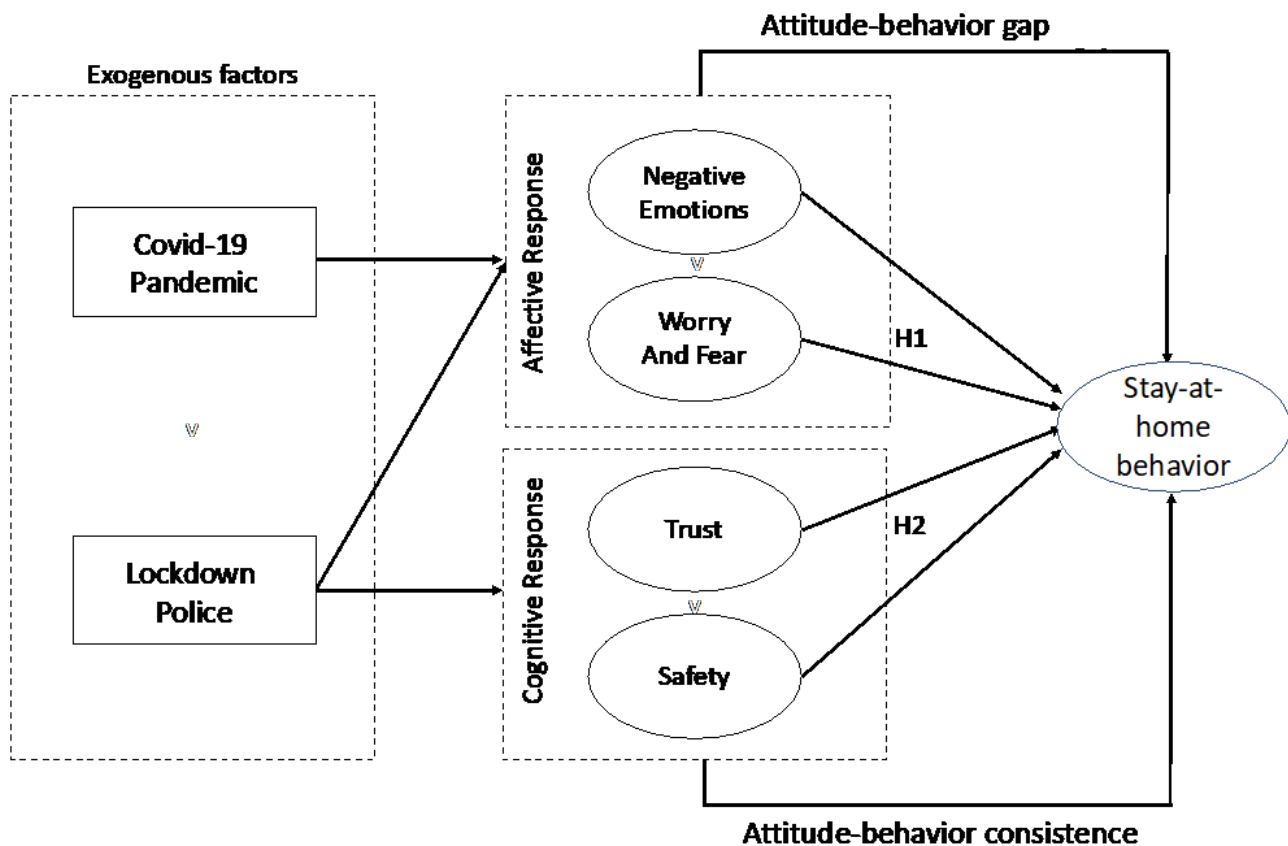


Figure 2: Framework with the results
 Source: Elaborated by the authors (2022).

Like it was in the past, when the effectiveness of seat belts use was questioned (Fhanér & Hane, 1974), although institutionalized as a safety and mandatory measure, today people question the effectiveness of the sanitary measures implemented by the government to contain the spread of the virus.

Consistent with Gibson et al. (2021) results, these findings suggest that interventions aimed at strengthening the connection between social distancing intentions and actions may be especially beneficial among those with larger intention–behavior gaps, particularly if non-psychological barriers to social distancing can be addressed concurrently.

5.1 Theoretical implications

While past studies show the existence of a gap between attitude and behavior (Redondo & Puelles, 2017; Romero et al., 2018; Park & Lin, 2020), in general, as something negative (Grieco, 2018; Tarfaoui & Zkim, 2017; Wiederhold & Martinez, 2018), in the present study, this misalignment (gap) is conceived as inevitable and, in some measure, as “positive”. Of course, the fact that someone feels bad is relevant, but it is not about that, since the individual does what is right and positive for his/her health and for fighting the pandemic, even if s/he feels bad about it. Therefore, the idea is: It’s not about what people feel, but what they do.

But we also recognize that the positive behavior resulting from this gap with negative attitudes might cause psychological impairments. Recent research points out that psychological discomfort or distress has been triggered by the COVID-19 pandemic (Barari et al., 2020; Goularte et al., 2021; Kim & Jung, 2020), by the lockdown measures and restriction of social interaction (Benke et al., 2020), and by the gap between attitude and behavior (Séré de Lanauze & Siadou-Martin, 2019).

That is why the authorities must provide the society with enough information and orientation to convince people based on facts and rational arguments when some hard measure is necessary to the common well-being.

To the best of our knowledge, this research is the first empirical work to understand how the attitude-behavior gap occurs during a pandemic situation in Brazil. Additionally, prior research generally suggest that the attitude-behavior gap is negative because it has been analyzed under the lens of buying behavior. The current research contributes to this stream of literature by offering a novel insight into other behaviors for which individuals must be educated and oriented.

To Barbera and Ajzen (2020), the greater perceived behavioral control tends to increase the relative importance of attitude in the prediction of intention, it tends to decrease the importance of subjective norm. So, we can conclude that the opposite is true, what means that the lower the perceived behavioral control is, the lower is relative importance of attitude in the prediction of intention, the greater is the importance of subjective norm.

5.2 Managerial and practical implications.

As for managerial implications, the research shows that companies selling necessary but unpleasant products or services (such as funeral home, cemetery, insurance company, dentist, notary public) can stimulate buying behavior by addressing consumers’ negative attitudes, which are sometimes important for the purchase decision.

The managerial implications can also be useful to the communication of governments, authorities, professionals, and policy makers. Park et. Al. (2021) propose that threatening situations like COVID-19 motivate consumers to lower their uncertainty and increase their preference for authentic advertising messages. Thus, policymakers should be more aware of the importance of accurate and transparent information to the public during critical times (Li et al., 2021) to inspire trust and safety in the society.

Findings suggest that policy makers should consider health communications that target attitudes, subjective norms, and perceptions of control when developing public health campaigns aimed at increasing social distancing compliance (Gibson et al, 2021). For instance, in 2020, the Ceará State Government

(Governo do Ceará, 2020) published four videos named “stay-at-home” (Figure 3), explaining how citizens should deal with COVID-19 and the importance of complying the sanitary measures.

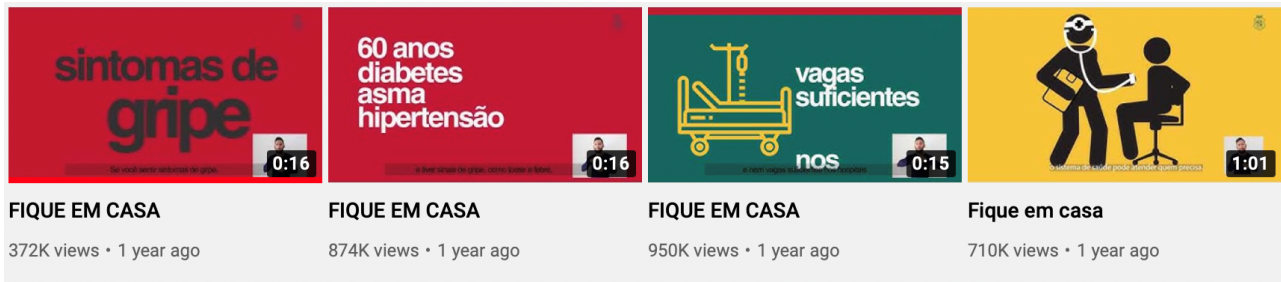


Figure 3: Stay-at-home video advertisings on YouTube
Source: Governo do Ceará (2020, April 14).

The City Hall of Fortaleza, the capital of Ceara, has launched a Covid-19 prevention booklet (2020) with guidelines for conduct and warnings about the risks of the disease, reinforcing the population confidence in the municipal government (Figure 4).



Figure 4: COVID-19 prevention booklet
Source: Prefeitura de Fortaleza (2020).

It is the public managers' role to work in the long term so that these negative attitudes towards the sanitary measures can be re-signified by the cognitive side, so that the behavior remains, but the feelings are not harmful to the citizen once the pandemic is gone.

6 Conclusion

During lockdown, individuals feel negative emotions, that is, suffocated, irritated, nervous, uncomfortable, confined, and anxious. These results show that the affective dimension of the attitudes is negative, but it can be compensated by rational communication that can inspire trust and safety in the society, reinforce the stay-at-home behavior during the COVID-19 pandemic.

The factors "Negative Emotions" and "Worry and Fear" represent an attitude-behavior inconsistency, because they are negative affective responses towards the lockdown measures and the pandemic itself. There is an attitude-behavior gap since there is unfavorable attitudes towards a positive behavior (i.e., the stay-at-home behavior). This gap occurs through affective responses of attitude (i.e., "negative emotions" and "worry and fear"). However, differently from our expectation, the findings show that the factors “trust” and “safety” represent an attitude-behavior consistency in this context. Both are cognitive responses of attitudes.

So, our research confirms that affective responses related to stay-at-home behavior during the pandemic are negative, however, the cognitive responses related to stay-at-home behavior during the pandemic are as positive as the behavior. Findings suggest that policymakers should consider health communications that

target consistent information when developing public health campaigns aimed at increasing people rational side and knowledge of the problem to gain their comprehension and support, even with sacrifice.

The results should be interpreted in light of several limitations. Without experimentally manipulating these constructs we are unable to make causal inferences. It is also important to note that our research assessed attitude to social distance. As such, it is possible that the strength of the relationship between social distancing attitude and behavior may have been underestimated.

For future studies, we intend to investigate the existence of what we called the “positive gap”, but in a situation where the behavior is not imposed by law, to answer the question: Is it possible to exist a positive attitude-behavior gap?

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