Recreancy Theory, Media Agenda Setting, and the Coronavirus Pandemic, 2019-2020

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ABSTRACT

Since COVID-19 was recognized as a global pandemic, the incidence, prevalence and mortality resulting from the disease has been described by the media widely and often. In order to reduce the rapid transmission of the virus, social institutions such as health care and government have asked citizens to adhere to both avoidant and preventive behaviors. Risk of illness and death and avoidance behavior are common elements in media coverage. In this context we explore both Recreancy Theory and Media Agenda Setting Theory. Recreancy Theory states that citizens base their risk assessments upon their evaluation of the abilities of social institutions to adequately manage and regulate risk. Media Agenda setting Theory argues that the press and other media coverage of the news has an effect on which issues, institutions, or events people pay attention to think are important. The data we use are taken from a U.S. survey conducted in March 2020 (N=8685). We first investigate the role of recreancy theory on the public's perception that the COVID-19 is a risk for the U.S. population; and second, we investigate the extent to which that risk affects avoidant behavior change. Our findings provide partial support for Recreancy Theory that is, differences in citizen's evaluation of the performance of different levels of government (President, State and Local Government) affects their perception of the virus as a threat to the well-being of the population. It also affects their willingness to engage in avoidant behaviors. Consistent with the Media Agenda Setting Theory, we found that frequency of exposure to the news increased both the perception of risk and the adherence to avoidant behaviors. The theoretical implications are discussed.

INTRODUCTION

The Coronavirus disease syndrome (COVID-19) was identified in Wuhan, China early in December, 2019. From there the disease spread rapidly, globally and lethally to the world's nations. By June 2020 more than 7 million cases and 4000,000 deaths caused by COVID-19 had been reported by the World Health

Organization (WHO, 2020) [1]. Of that number, 1,956,421 cases and 110,925 deaths were reported in the United States (CDC, 2002) [2]. COVID-19's rapid rate of infection and worldwide spread has led some to suggest that overall it may kill twice as many persons as did the global 1918 flue pandemic (Loveless, 2020) [3]. In addition to death and illness, COVID-19 has had large negative effects of the global economy and trade as wells as other fundamental segments of society (Hutt 2020) [4].

When a pandemic occurs, in addition to the wave of illness and death, it brings with it, an additional wave. It is a wave of media reports that provide the population not only with news of the outbreak, but also with false accounts, distortions, speculations, propaganda and lies (Mesch, Schwirian, et al. 2013; Bomlitz, et al. 2008.) [5,6]. This information flood contributes to peoples' emerging outlook on the possibilities and probabilities of death, disease, infection, and life disruption. Media might amplify the public health consequences of the pandemic (Garfin, et al. 2020) [7]. This information flow contributes to the evaluations people make of the response of society's institutions to the COVID-19 threat to their health and wellbeing. The performance of social institutions during the pandemic goes far in determining the ultimate historic and social definition of the pandemic event (McCormick, et al. 2013) [8]. At this writing, the records on COVID-19 are accumulating and await further investigations for a determination of its ultimate definition and social frame as an historic disease.

In most developed countries, a major focus of the policy has been minimizing the transmission of the virus. The goal was to flatten, as much as possible, the epidemic peak and lessen the impact on healthcare services, enabling the most severe cases to be treated successfully and reduce overall mortality. The success of these measures is particularly critical in the case of COVID-19 due to lack of vaccine, its high transmissibility, severity, and mortality rate, in particular among older individuals. However, these protective measures rely largely on rapid and drastic changes in the population every day and routine behavior, which are dependent on individuals' ability to perceive risks associated with the virus and adapt their behavior accordingly. Given the importance of institutional context, it is crucial to assess factors associated with these dramatic behavioral responses to the situation and determine how trust in social institutions and perceived vulnerability to becoming infected by the virus, are linked to the adoption

and engagement in protective behaviors and social avoidant behaviors.

In this paper we focus on two aspects of the population's response to the COVID-19 pandemic of 2019- 2020. The first is the extent to which people see the disease as a threat to the health of the population. The second focus is on the avoidant behaviors people engage in to minimize their risk of infection from the virus. We also explore how the perception of threat, the perceptions of social institution performance and the exposure to the media affect this behavior.

THEORY, HYPOTHESES, AND METHODS

We draw on two theoretical models. They are the Recreancy Theory (Freudenburg 1993) [9] and Media Agenda Setting Theory (Dearing and Rogers 1996) [10].

The foundation of the recreancy model is based on the sociological premise that citizens living in technological advanced societies have become dependent upon their technology rather than being in control of their technologies (Giddens 1990, 1992; Beck 1992) [11,12]. Therefore, it is assumed that to an increasing extent citizens base their risk assessments upon the abilities of social institutions to adequately manage and regulate risk. The recreancy theory (Freudenburg 1993) [9] states that trust is explained by people's perception of both the competency of institutional actors and their confidence that these actors will behave with fiduciary responsibility; that is – with honesty and integrity, with the right values as guidelines and with the consumer in mind. The term 'recreancy' is used to avoid implications of malfeasance by those responsible for technology development and oversight. Within this context, recreancy refers either to a lack of available knowledge or to lack of expertise to adequately control technological risks. Lack of either of these, can lead to a perception by the public that societal institutions do not adequately understand the risks (Saap and Downing-Matibag, T. 2009) [13].

Like other social science approaches, the Recreancy Theory recognizes the importance of perceived risks in affecting trust in societal institutions. The theory differs from other social science approaches in asserting that perceived risks primarily reflect people's evaluations of the performance of institutional actors. The unique contribution of this paper is that, instead of viewing social institutions as a unified block, our data allows us to investigate the extent to which there is consistency or

lack thereof in the evaluation of different levels of government (Federal, State and local) and the health system. This distinction has not been evaluated in the past but is very pertinent to the particular case of COVID-19 in the U.S today [14].

For example, at this point in time the populations' evaluation of the U.S. President is very different than is the evaluation of the Health Care Institution (Table 1). In part this stems from different messaging of the two institutions and in part from different positions on the response to COVID-19. For example, one important health behavior that the Health Care Institution supports is the wearing of masks to reduce infections. Dr. Anthony Fauci, a leading spokesperson for the Health Care Institution said, "Americans who don't wear masks may 'propagate the further spread of the infection'"(Loveless, Jr. and Higgans-Dunn, 2020) [15]. In contrast the messaging of the Presidency disparages use of masks. Donald Trump has shared a tweet arguing that the mandated use of masks represents "a culture of silence, slavery, and social death" (Relman, 2020) [16]. Such disagreement between major institutions can lead to a sense of confusion in the population and an enhanced sense of recreancy.

Thus, the central components of the recreancy theory are trust, perceived threat and evaluation of the ability of the social actors' skills to cope. The unique contribution to the study of recreancy in this paper is that this data set permits us to perform citizen evaluation of basic social institutions rather than a general overall evaluation of combined institutions.

The Media Agenda Setting Theory argues that press and other media coverage of the news has an effect on which issues, institutions, or events people pay attention to and which issues people think are important (Dearing and Rogers 1960) [10]. During a serious virus outbreak such media reports are among the action cues that help shape people's evaluations of the adequacy of institutions in providing for their own health or the health of the population (Garfin, Cohen-Silver and Holman, E.A. 2020) [9].

In an outbreak such as COVID-19, the media carry reports describing how hospitals, health care workers, public officials, and others are working to stem the infection, save lives, and encourage preventive behaviors. In their reports, the media are not always consistent in the views they present to the public. As a result there is an ongoing contest among media sources that may confuse the population as to what actually is going on. Consequently many competing social frames and opinion clusters of people, events, and institutions may emerge. Significantly, these frames and evaluations become linked with ideologies and political party identifications. Such opinion turmoil may result that it becomes difficult to develop consensus in problem solving activities.

Hypotheses

We propose two fundamental hypotheses. They are: Net of the effect of other variables, the evaluations that people make (either positive or negative) of societies social institutions affect (1) the perceptions they have of their personal and society's health and (2) the protective health behaviors in which they engage.

METHOD

We conducted a secondary data analysis of a national survey of the US population conducted by the Pew Research Center American Trends Panel. The data were collected between March 19 and March 24, 2020. The overall target population was non-institutionalized persons age 18 and over living in the US, including Alaska and Hawaii. Overall 11,537 respondents completed the questionnaire which reflected the outbreak of COVID-19. Survey weights are needed to support reliable inference from the panel to the target population of US adults. The final data set contains a total sample weight variable that was used in our secondary analysis of the data.

Study Variables

The purpose of this study was to investigate the association of recreancy, media exposure and socio-demographic variables on the perception of threat to the population and the adoption of avoidant social distance behaviors. The variables are:

Population threat was measured with an item that asks the respondent to indicate how much of a threat, if any, is the corona virus to the U.S. population as a whole? Responses were coded 1 for a "major" and "minor" threat and 0 for "not a threat".

Avoidant Behavior is an index that was created from 5 items that asked respondents to indicate if given the current situation with the COV19 outbreak, they feel comfortable or uncomfortable with: (1) Visiting a close friend or family, (2) Eating out in a restaurant, (3) Attending a crowded party, (4) Going out to a grocery store, and (5) Going to a polling place to vote. An explanatory factor analysis showed that the

variables belong to the same dimension and an index was created summing up the responses. The resulting scale has internal reliability (α=.73).

General trust was measured using three items from the survey. Respondents were asked to indicate the extent that "most people can be trusted", that "most people would try to be fair no matter what" and "most people try to help others". The items were combined in a single index summing up the responses, with higher values indicating higher trust in others.

Exposure to the news was measured using an item that asked the respondents to indicate "how closely they have been following the news about the coronavirus outbreak? " Responses ranged from "not at all closely" to "very closely".

Recreancy was measured with 5 items that asked respondents to indicate how they would rate the job each of the following is doing responding to the corona virus outbreak: President of the U.S., your state elected officials, your local government elected officials, your public health officials, and ordinary people in the community. Responses for each item were from "Poor" to "Excellent". Each item was introduced separately into the multivariate analysis.

We used a number of modifying variables. Party denomination was measured with an item that asked the Party denomination or party lean to of the respondent. The variable was coded as a dummy variable when 1 indicated "Republican" and 0 indicated "Democrat". Age was measured in with 4 categories (18-29,

30-49, 50-64 and 65+), Gender was coded 1=for men and 0 for women; marital status was coded 1 for married and living together and 0 for single, divorced and widowed. Education was measured using a scale of 6 educational categories from 1(less than high school) to 6 (postgraduate studies).

FINDINGS

The sample included 8,685 respondents. Eleven percent was between 18 to 29 years old, 32 percent were between 30 to 49 years old, almost 30 percent were between 50 to 64 years old, and 25 percent were older than 65 years. Almost 55 percent were women and 64 percent of the total sample were married or living with a partner. The level of general trust was quite high among the survey participants: 55 percent believe that people will not take advantage of others, 53 percent that people will try to be fair and 62 percent trust most of the people. News consumption regarding the virus outbreak was widespread, almost 65 percent of the sample reported following closely the news on the virus. There was great variability in the evaluation of social institutions dealing with the virus onslaught. Only 23.6 percent evaluated the performance of the U.S. President as "excellent" and 24 percent as "good". As to State government officials, 25 percent were evaluated as "excellent" and 48 percent as "good". The local government had a very low grade; as only 20 percent evaluated them as an "excellent" in performance and 53 percent as "good". Evaluation of public health officials was low, as only 31.7 percent described it as 'excellent' and almost 47 percent as "good".

Table 1: Descriptive Statistics. T-test for differences of selected groups by perception of population threat.

Variable	No	Yes
Age	2.43 (1.10)	2.49 (1.03)**
Gender (1=Male)	.56 (.49)	.43 (.49)
Education	3.32 (1.54)	3.46 (1.58)**
Marital Status (1=married)	.77 (.42)	.74 (.43)**
General Trust	1.46 (1.25)	1.37 (1.25)**
Following News	3.28 (.75)	3.58 (.61)**
Evaluation President	.63(.48)	.40 (.49)**
Evaluation State	2.71 (.84)	2.90 (.83)**
Evaluation Local Government	2.72 (.82)	2.83 (.80)**
Evaluation Citizens	2.65 (.87)	2.65 (.83)
Evaluation of Public Health	3.03 (.77)	3.04 (.81)
Republican	.65 (.47)	.36 (.48)**

Data in Table 1 show results of the t-test for differences in the mean/proportion according to perception of threat. It shows that older individuals report a higher perception that the virus is a threat to the U.S. population. Perceived threat is higher among women than males and for the higher levels of education levels. Trust is higher for people who do not feel the virus is a threat to the population. There is a difference in perceived threat according to the extent of exposure to the media. Individuals reporting greater threat also report a higher average of exposure to the news.

There is a difference according to perceived threat in the evaluation of the President of the U.S., as the ones that do not perceive a virus threat to the population reported a higher evaluation of the President than do the ones not reporting threat. For the evaluation of other social institutions, the results for State government and local government show that respondents feeling a threat report a higher evaluation of these governments as compared to those that do not feel a threat to the U.S. Population. Perceived threat to the population is a central concept in recreancy theory. Table 2 presents the logistic regression analysis of the determinants of the likelihood of perception that the virus is a serious threat to the U.S population.

Table 2: Multivariate Analysis.

Variable name	Population Threat		Avoidant Behavior	
	B (S.E.)	Odd ratio	B (S.E.)	β
Age	.14 (.31)	1.16**	.08 (.01)	.05**
Gender (1=male)	-.54 (05)	.58**	-.36 (.03)	-.11**
Education	-.01 (.01)	.98	.02 (.01)	.02**
Marital status (Married=1)	.05 (.06)	1.05	.19 (.03)	.05**
General Trust	-.14(.02)	.866**	-.04 (.01)	-.03**
Exposure to the News	.64(.04)	1.90**	.40 (.02)	.16**
Evaluation of President	-.45(.07)	.63**	-.24 (.04)	-.08**
Evaluation of state Government	.32 (.04)	1.38**	.10 (.02)	.05**
Evaluation of local government	.08(.04)	1.09	-.02 (.02)	-.01
Evaluation of Citizen Behavior	-.03(.03)	.969	-.11 (.02)	-.06**
Evaluation of Health system	-.12(.01)	.88**	.001 (.02)	.001
Party denomination (republican=1)	-.88 (.07)	.41**	-.055 (.04)	-.01**
Population Threat			.95 (.03)	.29**
Constant	-.80 (.1)	.44**	1.10 (.12)**	
Pseudo R square	.21		.19	
N=.21	8685		7732	

The results indicate that general trust is negatively associated with the perception of threat; the higher the trust in others, the less the perception of threat. As expected, exposure to the news increased the likelihood of a perception of threat of the virus to the population. The higher the exposure to the news, the greater the likelihood of perceiving the virus as a serious threat to the U.S. population. Respondents' evaluations of social institutions' performance during the crisis are mixed. Evaluations of the performance of the President of the U.S. are negatively related to the perception of threat. While, this is finding may be considered as surprising it has to do with the nature of the inconsistent messages of the news media and of the President of the U.S. The effect of the State government is positive, indicating that a higher perception of the performance of the State government was associated with a higher likelihood of perceiving the virus as a serious threat to the U.S. population. Evaluation of the performance of the Health Care System is negatively associated with the perception of threat. The higher the evaluation of the performance of the Health Care System the lower the perception of threat. Two modifying variables were statistically significant as well. The older the respondent the higher the perception of threat and men reported a lower likelihood of threat perception than women.

Avoidance Measures

Avoidance measures are the most recommended measures to prevent the diffusion of the disease, in particular, when there is no vaccine or effective treatment as it was at this writing. Table 2 present the results of an OLS predicting the extent of feeling uncomfortable in participating in activities of avoidant behavior. General trust is negatively related to avoidant behaviors. The more trust in others, the less the lack of comfort in participating in crowded activities. Furthermore, exposure to news is positively related to feeling uncomfortable to meet family and friends, going to restaurants and so forth. Positive evaluation of the performance of the U.S. President is negatively related to the avoidant behaviors. Positive evaluation of the State government is positively related to the adoption of avoidant behaviors. Finally, perception of that the virus is a threat to the U.S. population is positively related to the adoption of avoidant behaviors.

DISCUSSION AND CONCLUDING REMARKS

The data analysis shows that the empirical connection between general trust, institutional evaluation, and media exposure each has a significant independent effect on the perception to which COVID-19 is a threat to the US population. These findings are consistent with the earlier argument of Mesch G, et al. (2019) [17] that protective health behaviors (including vaccination) in the context of a pandemic largely reflect: trust in the government's ability to control the disease outbreak, a generalized sense of fear of infection and illness, and anticipation of personally encountering the disease.

As to recreancy theory, our paper makes two important contributions. First, demonstrates the important role of perceived performance of the social institutions on the perceived seriousness of threat for the nation's population. In the case of the U.S. a positive evaluation of the President and the Health system performance, is associated with reducing the general anxiety. Second, our study shows a contradiction of this finding. As the President at the time was denying the scope and lethal consequences of the pandemic situation, this confidence did not translate in the imperative of adoption of avoiding behaviors to flatten the curve. Confidence in the performance of the U.S. President was negatively associated with adoption of avoidant behaviors. Trust in health institutions had a negative effect on threat, but did not have a direct effect on avoidant behaviors. Future studies need to conduct more studies on the differential effect of trust in different levels of the government and social institutions, a critical variable to our understanding of the willingness of citizens to collaborate with public health policy for the well-being of the entire population.

At this writing vaccine is available for mass distribution to the population through vaccinations. We anticipate that as the vaccine becomes even more available, a conflict over its distribution would and did emerge that linked with the current ongoing anti avoidant behaviors confrontations. The media have already reported early on such conflicts with much misinformation in South Africa over the first trial of a COVID-19 vaccine (Anna, 2020) [18].

REFERENCES

1. World Health Organization (W.H.O). (2020). Coronavirus disease (COVID-19) situation report-141.

2. Center for Disease Control and Prevention (CDC). (2020). Cases in the U.S.

3. Berkeley L. (2020). The Corona Virus may be deadlier than the 1918 flu. Health and Science CNBC March 27, 2020.

4. Roseamond H. (2020). The economic effects of CONVID-19 around the world. World Economic Form: February 17, 2020.

5. Mesch GS, Schwirian KP, Kolobov T. (2013). Attention to the media and worry over becoming infected: the case of the Swine Flu (H1N1) Epidemic of 2009. Sociol Health Illn. 35(2):325-331.

6. Bomlitz LJ, Brezis M. (2008). Misrepresentation of health risks by mass media. J Public Health. 30(2):202-204.

7. Garfin DR, Silver RC, Holman EA. (2020). The novel coronavirus outbreak: Amplification of public Health Consequences by Media Exposure. Health Psychology:1-3.

8. McCormick S, Whitney K. (1992). The making of public health emergencies: West Nile virus in New York City. Sociology Health & Illness.

9. Garfin DR, Silver RC, Holman EA. (2020). The novel coronavirus outbreak: Amplification of public Health Consequences by Media Exposure. Health Psychology:1-3.

10. Dearing JW, Rogers EM, Rogers E. (1996). Agenda-setting.

11. Giddens A. (1990). The Consequences of Modernity. Stanford University Press, Stanford, CA.

12. Beck U. (1992).Risk Society: Towards a New Modernity.

13. Saap SG, Downing-Matibag T. (2009). Consumer acceptance of food irradiation: a test of the recreancy theorem. Int J Consumer Studies. 33:417-424.

14. Anderson RM, Heesterbeek H, Klinkenberg D, Hollingsworth TD. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? Lancet. 395(10228):931-934.

15. Berkeley L Jr., Higgans-Dunn N. (2020). Dr. Anthony Fauci says Americans who don't wear masks may 'propagate the further spread of infection'.

16. Eliza R. (2020). Masks represent 'silence, slavery, and social death.

17. Mesch GS, Schwirian KP. (2019). Vaccination hesitancy: fear, trust, and exposure expectancy of an Ebola outbreak. Heliyon. 5(7):e02016.

18. Cara A. (2020). Protest versus Africa's 1St COVID-19 vaccine test.