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Eduardo A. Garza
Texas A&M International University

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Evaluating COVID-19 Response by the City of Laredo and the Webb County Emergency Management Program

EDUARDO A. GARZA
College of Arts and Sciences
Texas A&M International University
Laredo, Texas, USA

This research considers the current response to the COVID-19 pandemic by South Texas municipalities: Webb County and the cities of Laredo, Rio Bravo, and El Cenizo. The ongoing health crisis due to the COVID-19 pandemic necessitates the evaluation of emergency programs to gauge their effectiveness. The research focuses on the local government's ability to manage the pandemic using four evaluation criteria of emergency management: preparedness, mitigation, response, and recovery. Using two sets of surveys targeting key informants, perceptions regarding the program's response were captured. Qualitative and quantitative analytical techniques are applied to analyze the data. The findings show that COVID-19 is putting intense strain on the local governmental process. Early response measures during the first signs of infections helped to prepare and activate the public health infrastructure early on. However, when the state overruled many of the local mandates across the State of Texas, infections and hospitalizations spread rapidly. In addition, the public survey indicated that citizens are in favor of stricter enforcement measures, school closures, and maintaining open communication.

* Address correspondence to Eduardo A. Garza, Master of Public Administration Program, College of Arts and Sciences, Texas A&M International University, 5201 University Boulevard, Laredo, Texas 78041. Email: eantonio_garza@dusty.tamiu.edu.

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I. Introduction

The research aims to evaluate the current response to the COVID-19 pandemic by local governments including the City of Laredo and Webb County via the Webb County Emergency Management Program (WCEMP). Established in February 2005 by the Commissioners Court of Webb County, the WCEMP is the county's "comprehensive and integrated" emergency management system that is utilized to prepare and respond to all-hazards situations (Emergency Management 2020). Its vision is "to build a resilient community that fosters preparedness and community-wide collaboration through partnerships with local, private, and non-governmental organizations" (Emergency Management 2020). The primary goal for this research is to evaluate the readiness capabilities of the local government and, if necessary, advocate for changes that promote a constant state of readiness while keeping in mind efficiency and efficacy. A risk-based assessment will be key in identifying threats to the county and its citizens. To this end, this research will focus on four questions: (1) Do the municipalities have the ability to manage the pandemic? (2) What do local citizens think of the local government's response? (3) What challenges do the municipalities face in the implementation of their response strategies? (4) How can the responses be improved?

II. Background and literature

The importance of this research cannot be understated. Emergency management is a crucial field of public administration that has no room for error. Lapses in judgment, inefficiency in planning frameworks, and bureaucratic red tape can lead to chaos, lives lost, and destroyed property. A notable example of a poor post-disaster recovery response resulted from Hurricane Katrina in 2005. As such, an in-depth evaluation of the local government's emergency management response in relation to the ongoing COVID-19 health crisis is necessary to gauge readiness capabilities and key performance indicators (KPI). The identification of KPIs will allow administrators and the evaluator to measure the output of the response and, in turn, its effectiveness. This is at the heart of what makes evaluation an important aspect of practical public administration research. As Daniel Henstra (2010) discovered during an emergency management case study, communities may prioritize resources and funding to emergency recovery and very little to mitigate that emergency in the first place. A thorough evaluation can uncover these inequalities. Despite the empirical and practical nature of this evaluation, the research to be conducted is mission-specific which indicates limited applicability to other areas of public administration that is not Laredo or Webb County (McNabb 2018). However, the findings are still sure to be useful in the general aspect of improving emergency management as it is concerned with COVID-19. As others have suggested, evaluating emergency plans and responses is somewhat challenging due to the rare nature of disasters occurring (Henstra 2010). As such, many emergency managers and members lack the experience of activating their plans in a real-world disaster scenario. This can lead to ineffective planning and miscoordination (Wolensky and Wolensky 1990). Additionally, resources and plans may differ between crises as some communities are more prone to other types of disasters. For example, a community in California will experience more earthquakes than Laredo or Webb County will probably ever experience. However, COVID-19 has proven to be an equalizer across the emergency management board. Many cities were not ready for it, and recent spikes in infections

and the lack of a firm and steadfast response from various levels of government indicate that governments are still not prepared.

South Texas is no different when it comes to its capabilities in addressing COVID-19. On March 16, 2020, Laredo identified its first COVID-positive citizen (Wallace 2020). As of June 5, 2020, 594 citizens have tested positive and the number continues to rise and shows a trend of an upward spike. On June 22, 2020, the City of Laredo rolled-out a new color-coded advisory system in which the city is now being placed on Level 4, the highest risk of infection, indicating that there are more than 250 active positives within the city (City of Laredo 2020). Some of the local government's responses have included regular press briefings, daily updates regarding the COVID situation on social media, free chemical disinfectant pick-ups, free COVID screenings, and free meals provided to school children.

However, emergency management planning goes beyond the pandemic response. Plans must account for every single reasonable crisis that can be experienced despite how small the probability an actual occurrence of the event may be. This is where the National Incident Management System (NIMS) comes in. NIMS is a standardized approach to preparing, responding, recovering, and mitigating emergency incidents. It was first introduced in 2004 by the Federal Emergency Management Agency (FEMA) so that multiagency institutions all across the United States can work to effectively manage emergencies (NIMS 2017). Over time, NIMS has evolved into an all-hazards approach system, and it is the very same system that the WCEMP uses. Within NIMS, the standardized chain of command is known as the Incident Command System (ICS). ICS standardizes and designates the roles and responsibilities throughout all levels of government. It is common to have multiple ICSs throughout institutions. For example, a school district may have its own ICS while the city has one too. They can also vary depending on the emergency. An ICS for a fire emergency will rely on the subject matter expert, that is, the Fire Department Chief.¹ As the emergency in question deals with public health, the ICS is heavily dependent on the City of Laredo Health Department and the WCEMP. However, they are joined through acts of cooperation and communication. Emergency management planning comprises four main tenets: preparedness, response, recovery, and mitigation (Henstra 2010). Through a significant number of literature reviews and case studies on municipal emergency management, Wolenksy and Wolensky (1990, 716) discovered that "local governments and their officials...relegate [disaster management] to a low priority, adopt responses in a manner with the 'normal' custodial role, and yield to the pressures of powerful private interests." In other words, they failed to uphold the four main tenets mentioned above. For that reason, this research's exploration of the local government's response is very important.

III. Design and methodology

Because of the challenge COVID-19 brings due to its novelty, the design of this study will take an exploratory format. In order to complete the study, reviewing the official literature prepared by the City of Laredo and the WCEMP will allow for the evaluation and identification of the KPIs that will be measured as well as the entire structure of the program itself. The application of SMART goals will aid in the identification of the KPIs. SMART refers to goals or indicators that are specific, measurable, achievable, relevant, and time-bound. Widely attributed to Peter Drucker, the SMART process is a key tool of his "management by objective (MBO)" management

¹ Survey interview conducted on June 22, 2020.

philosophy (Drucker 2007). This evaluation is very much aligned with his MBO theory as in addition to identifying KPIs, SMART objective defining will ensure that members of the WCEMP are reminded of the necessity of having clearly defined goals.

Furthermore, data collection will also be supplemented through the use of key informant interviews and survey questionnaires. McNabb (2018) denotes key informants to be individuals who have more knowledge about the problem to be studied. Therefore, the key informants in this study will be the individuals in charge of Laredo's and Webb County's official COVID-19 response network. The primary target for these surveys is the citizens of Laredo and Webb County.

Data sources and data collection methods

This research will require a review and evaluation of the local government's COVID-19 response with a focus on how effective the public perceives it to be. Thus, the study will include a critical analysis of the local government's operations and will be both quantitative and qualitative in nature. The mixed design for such an attempt makes it necessary to include two survey questionnaires for the quantitative and qualitative data, and similar published research for the comparison of the qualitative data (McNabb 2018). Personal interviews will follow a purposive sampling approach and will be applied to the relevant members of the City of Laredo and the WCEMP. The survey questionnaire, on the other hand, will follow a random sampling approach to assess citizen satisfaction with the local response. For both data collection methods, anonymity will be preserved.

The entirety of the data will come from official documentation provided by the City of Laredo and WCEMP, the subjects to be interviewed formally, and data gathered through the surveys. Introduction to the nature of the study and the research to be conducted will begin through formal contact via emails found on social media and the official City of Laredo and Webb County websites. Laredo, Webb County, and a number of elected officials operate very responsive social media profiles, so a quick reply is both feasible and conducive to the study as there is no cost associated with this process. First contact will include a quick introduction by the researcher and a summary of what the research entails, its purpose, and its design. To this end, permission to conduct in-person or virtual interviews with key representatives of the City of Laredo COVID-19 response team and WCEMP team, distribution of the survey questionnaires, and reviewing official documentation will also be initiated.

As for official records, the City of Laredo and Webb County's Emergency Management Plan will be the primary sources of information. As there is no electronic copy of the plan available online as confirmed by several members of the WCEMP, a study of the document will occur in-person at the WCEMP office located at the Webb County Courthouse. Supplementary documentation will include the latest budget of the program as well as its existing resources and assets. Any official documentation should be and will be treated with the utmost confidentiality to maintain trust in the researcher and the university, and to promote further cooperation with university researchers.

Key informant interviews will be approached using the purposive sampling and case study method due to the specific nature of the data that is required and the expertise and authority that is needed to have access to such data. The pool of the participants to be interviewed will then consist of members of the WCEMP and City of Laredo officials. The biggest challenge interviews present at the moment is the need to exercise social distancing due to COVID-19 concerns. As such, virtual interviews will be prioritized when possible and if permission is granted by the subjects.

Additionally, syncing the availability of the researcher and participants presents another challenge to be met. The questionnaire that will be utilized for the key informant interviews is located in Appendix A.

A random sampling approach will be taken with the survey questionnaire which will be extended to the citizens of Laredo and Webb County. Survey distribution will occur through social media. The survey questionnaire that will be utilized for the public is shown in Appendix B. It is designed to gather the relative sentiments and satisfaction of citizens on the effectiveness of the local government's pandemic response.

Questionnaire

The study will use two questionnaires hosted on the website SurveyMonkey. The first set of questions will be administered to key informants during an interview conducted either in-person, by phone call, or by virtual meeting. This questionnaire is provided in Appendix A. Given the need for social distancing, the latter two will be prioritized. These questions, in particular, aim to create a timeline and evolution of the local government's response so far. This is to ensure that the key informant's time is not wasted with irrelevant questions that offer little in the way of data collection. The second set of questions will be administered to citizens of Laredo and Webb County through the use of social media. In that sense, these questionnaires are self-administered. This questionnaire is provided in Appendix B. Both questionnaires are worded and presented in a way that will minimize bias. The questions are neutrally worded, not leading, and follow McNabb's (2018) suggestion of clarity, brevity, simplicity, and precision. The questions meant for the public contain a filter question to prevent non-citizens of Laredo and Webb County from answering the citizen-specific questionnaire. This is done to encourage responses only from local citizens. Additionally, anonymity will also be practiced to allow survey-takers the confidence to answer truthfully. If the number of returned surveys is insufficient during the first round of surveying, other social media platforms can further bolster returns as well as looking into using TAMIU's email system to distribute the surveys to students.

The key informant questionnaire contains seven questions: (1) How has COVID-19 made it necessary to deviate the way the local government responds to a health crisis as outlined in the health crisis portion of the emergency plan? (2) To your knowledge, does the local government have performance indicators to measure the progress and efficiency of the response? If yes, what are they? (3) What are some SMART goals specific to the pandemic response that the local government aims for? SMART refers to goals that are specific, measurable, achievable, relevant and time bound. (4) What challenges have the local governments faced regarding its implementation of the response measures? (5) How is the response budget being maintained and monitored? (6) Rank your organization's resources level on a scale of low, moderate, or high. (7) If there was no interference from state or federal policy, would you adopt stricter response measures? The answers to these questions will measure how the response has evolved and will generate a conversation as to how it can further evolve in the future to make it more efficient in curbing infections, spikes, and producing and enforcing good policy. Responses to these questions will be anonymous, and any audio recordings made during the interview will be password protected and the subject unnamed.

Moreover, the public questionnaire contains seven questions: (1) Do you live in Laredo or Webb County? (2) How satisfied are you with the local government's response? (3) What do you think of the local government's response when compared to other cities? (4) How satisfied are you

with the local government's community engagement on COVID-19? (5) What do you think of the local government's community engagement on COVID-19 compared to other cities? (6) How concerned are you with the local government's ability to combat COVID-19? (7) Do you have any suggestions for the local government regarding the COVID-19 response? Answers to these questions will gauge the public perception to the current response of the pandemic and offer feedback. Like the key informant interviews, responses will be anonymous.

Analytical techniques

After collecting data, there needs to be a deliberate method of interpreting it to find the utility within. That is where data analysis comes into play. When choosing an analytical method, it is important to keep in mind the design the research has followed thus far. Choosing a method that does not follow the existing research design can lead to a subpar analysis. The objective of the research should be the key driver throughout the entire research process and, of course, analysis of the data. Thus, finding the best technique for analysis is crucial. There are a variety of techniques to choose from, but since the research at hand uses a mixed design, meaning that both qualitative and quantitative designs are expressed within, both qualitative and quantitative analytical techniques are required.

The key informant questionnaire consists of open-ended questions [Q.1, Q.2, Q.3, Q.4, and Q.5] and close-ended questions [Q.6, and Q.7]. Due to the open-ended nature of the questionnaire and the interview for that matter, a rush of raw verbal data will be delivered by the key informants. It is important to remember that the key informants are subject matter experts in their field and work with varying complex concepts. It is only natural that within the course of normal speech, some irrelevant data can become expressed. It is up to the researcher to then extrapolate the relevant commonalities and data within their speech, and keep the informant trained on the correct focus of the questions. This is known as the process of *conceptualization*. As McNabb (2018, 279) describes it, it is the reduction of "often-bulky amounts of raw data into workable, ordered bits of information." Suitable options for conceptualization include looking for common keywords shared between the key informants or looking at whether the responses contain positive or negative connotations. Looking for these patterns can show trends and, in turn, be helpful. The information can then be utilized for the research's objective. Conceptualization will be the primary qualitative data analytical technique used in the key informant questionnaire. Because this questionnaire also contains close-ended questions, a quantitative analytical technique is required. This technique will be explained in detail in the following section regarding the public questionnaire.

Additionally, the public questionnaire contains close-ended questions [Q.1, Q.2, Q.3, Q.4, Q.5, and Q.6] and a single open-ended question [Q.7]. The close-ended questions contain a predetermined multiple-choice set that respondents can choose from. Some questions use the traditional four-point forced Likert scale. The forced Likert scale forces respondents into taking a stance on the question being asked. Choices include rating the level of satisfaction and concern respondents have regarding the local response to COVID-19. Unlike the previous questionnaire which, because it primarily consisted of open-ended questions, required the use of conceptualization, this questionnaire requires a different analytical technique of the quantitative nature. The researcher must convert the raw data coming from the respondents into quantifiable statistical data. A format that involves predetermined question sets allows for this data conversion to be relatively seamless. The primary task in this type of data analysis is to assign a value to each of the answer choices for each question in the questionnaire, but before any value is assigned,

choosing the best type of statistical measurement for the research's purposes is necessary. Due to the nominal (satisfaction and concern levels) and ordinal (citizenship information) nature of these questions, the best statistical measurement scale is the categorical one. An application of categorical measurement analysis is indicated by the assignment of a non-functional and non-purposeful number value (McNabb 2018). In other words, the number of values has no inherent meaning and offers no extra data. It is just a way for the researcher to categorize responses. Both nominal and ordinal data, both of which the two questionnaires include, use this method.

Due to this study's mixed design, it is necessary to utilize both qualitative and quantitative analytical techniques. Conceptualization will aid in the analysis of the qualitative data which is primarily but not exclusively in the key informant interviews and subsequent questionnaire. The second analytical technique will be the interpretation of numerical values from the conversion of the quantitative raw data of the public questionnaire. The numbers themselves do not hold any value but are given value by the researcher and their research purposes. In this case, the values will be useful in the interpretation of respondents' perception of the local COVID-19 response.

IV. Data collection

Data was collected during a one-week period using SurveyMonkey to host the key informant and public survey questionnaires. The link to the key informant questionnaire was sent directly to the key informants while the public survey questionnaire was linked through social media. Of the five key informant questionnaires administered, one was returned. Thus, to supplement the key informant data, information made available to the public assisted in the tracking of the local pandemic response.

When the key informant was asked how the pandemic has changed the governmental process (Q.1), they stated that it was now policy to limit face-to-face meetings, all while maintaining social distancing and using masks/face coverings. The performance indicators that the local government has adopted (Q.2) are expressed through charts and graphs that are available for public viewing on the City of Laredo website. However, these charts are not good at measuring daily performance as there is a lag time in testing data due to the large number of tests being submitted. At best, the charts show overall trends and are not an exact measurement. The main indicator that the government is relying on to see if the response is working is whether the overall infection rates are reducing within the community. Therefore, the identification of the KPIs is somewhat of a challenge, and instead of them being specific, because of the novel nature of the emergency, the KPIs are kept general. Thus, the overall, obvious, and general goal that the local government aims for (Q.3) is the reduction of infection rates and deaths of its citizens. The spike that is being experienced at the moment (or any future spikes) must be quelled through social distancing, mask use, self-isolating, and contact tracing to allow local resources to catch up. In this case, the key informant could not identify a SMART goal because establishing a time for the goal to be met is extremely difficult at this time. Furthermore, the key informant did express that the major challenge the local government is experiencing (Q.4) is that "the Community, (especially individuals between 18-30 years old), are not following the protective measures" the City and County have prescribed.² This statistic is corroborated by the official City of Laredo COVID-19 Statistical Data (City of Laredo 2020). Due to the rise in cases, a local Red Roof Inn establishment will be utilized to house COVID-19 patients, the hosting of which was coordinated by the City of

² Survey interview conducted on June 22, 2020.

Laredo and Webb County emergency response teams and FEMA (KGNS 2020a). Furthermore, the response budget is being maintained and monitored (Q.5) under the existing Emergency Response Plan which holds the Directors of Purchasing, Treasury, Economic Development, and Auditor's Offices in charge of tracking the local government's expenses. To that end, the key informant stated that the resources within the community are low and close to exhaustion (Q.6). This is on par with what is publicly known. Local hospitals are currently at or nearing capacity and supplies of the antiviral drug remdesivir are struggling to stay topped as infections rise (KGNS 2020b). Lastly, when asked if they would be in favor of adopting stricter response measures if there was no interference from state or federal policy (Q.7), the key informant expressed that they would.

On the other hand, the public questionnaire experienced more engagement, reaching a total of 111 respondents which, according to the data obtained from Q.1, included 105 usable responses (6 respondents indicated that they did not currently live in Laredo or Webb County and, thus, were excluded from the overall data pool). Statistical data will be rounded to the nearest whole and, thus, percentage totals will not always add up to 100%. Appendix C provides the complete statistical data and graphs. As shown in Figure C1, when respondents were asked to provide their level of satisfaction with the local government's response (Q.2), 4% stated they were very satisfied, 37% were satisfied, 37% were dissatisfied, and 22% were very dissatisfied. Figure C2 displays the data for responses to the question asking participants to compare the local government's response to other cities (Q.3); 45% held that it was better than others, 30% said it was worse than others, and 26% believed there was no difference between responses. When asked about the level of satisfaction from the local government's community engagement (Q.4), 8% were very satisfied, 44% were satisfied, 38% were dissatisfied, and 10% were very dissatisfied. This is shown in Figure C3. Figure C4 shows the perceptions regarding the comparison of the local government's community engagement to other cities (Q.5); 48% believed it to be better than others, 28% worse than others, and 25% said there was no difference. When asked to categorize their level of concern with the local government's ability to combat the pandemic (Q.6), 46% of respondents were very concerned, 39% were concerned, 11% were unconcerned, and 4% were very unconcerned. This information can be seen in Figure C5.

Lastly, Q.7 was the short-answer question that asked respondents if they had any suggestions for the local government, and the process of conceptualization was applied to categorize responses into common word groups. Answers that did not have any suggestions or were impossible to implement were removed from consideration. The responses could be categorized as falling within five key concepts: Better Communication, Better Testing, Citizen Involvement, Shut Down, and Stricter Enforcement. "Better Communication" refers to answers asking for more transparency in the daily updates, following-up with those that tested positive, and the continuation or expansion of COVID-19 information/hygiene campaigns. 15% of respondents suggested better communication. Answers tagged as "Better Testing" refers to answers that expressed dissatisfaction with local testing, of which 8% of respondents shared this opinion. "Citizen Involvement" refers to suggestions that held that the citizens themselves should become more proactive and follow proper safety guidelines which totaled 7% of the suggested answers. As it suggests, the "Shut Down" tag was generated because enough people expressed the desire for another shutdown, shelter-in-place, or keeping the schools closed. This key concept accounted for 38% of the answers received. Lastly, "Stricter Enforcement" refers to the answers that focused on the increase of fines, a continuation of the mandatory curfew, and the limiting of gatherings. These suggestions were shared by 32% of respondents. Figure C6 includes the statistical breakdown of

suggestions. As shown, the outliers include the desire for a mandated local shutdown and stricter enforcement of preventive measures.

V. Conclusion

The four questions the study aimed to answer were: (1) Do the municipalities have the ability to manage the pandemic? (2) What do local citizens think of the local government's response? (3) What are the challenges the local government faces in the implementation of its response? (4) How can the response be strengthened? Based on the findings from both the key informant interview and the public survey questionnaires, the small sample studied is in favor of enacting another shut down to combat the strain the virus is currently having on Laredo and Webb County. However, there is a noticeable split in the satisfaction with the local response: half believe it to be satisfactory while the other half unsatisfactory. Additionally, participants expressed favorability to keeping the schools closed for the upcoming school semester as well as the desire to enact stricter enforcement of safety policies including fining those who do not wear a mask in public, violate social gathering limitations, and break curfew. The greatest challenge, as indicated by the surveys, is the lack of initiative citizens are taking to isolate themselves which may be accounting for the spike in recent cases. As suggested by the participants and key informant, another local community shut down is recommended to allow for resources to build up once more. As it stands, the evidence strongly shows that the community is not prepared for the expected rise in cases as the Fall 2020 semester begins. Despite schools offering flex, split, or other alternative methods, as they remain open, the risk for cluster infections will increase. Local hospitals will more than likely not be prepared to handle these spikes. In summary, the surveys were able to generate a satisfactory answer to the first, second, and third questions of the study. Therefore, the study's objectives were achieved. However, as the COVID-19 pandemic continues to make its way through the community, continued surveying is recommended to account for changing perceptions and gather a larger sample size.

Although perhaps unintentional, the findings of this research study offer other less-than-obvious insights into the way COVID-19 has affected the Laredo and Webb County communities. This will be a lesson in public administration just as much as it is a lesson on the social impacts of COVID-19. According to *Time* magazine, Laredo was reportedly the first U.S. city to issue an emergency mandate for the use of masks or risk a \$1,000 fine (Carlisle 2020). The issue went into effect on April 2, 2020. At the time, the official COVID-19 infection rate for the city was 85. Not long after, on April 30th, Texas Governor Greg Abbott overruled mask mandates all over the state citing their inability to "deprive someone of their liberty" (Carter 2020). On July 2nd, with 1,703 positive cases in the community, Abbott reversed his stance and issued Executive Order No. GA-29 (State of Texas 2020), mandating masks with the risk of a fine not to exceed \$250 per violation.

The issue that is presented with this anecdote and the findings of the research is that there was a politicized skirmish between the city and the state with a backdrop of COVID-19. Public administration is a field that time and time again is subject to higher political institutions. However, not every decision is a good one, just as not every decision is a bad one. Nevertheless, there will be someone that is affected by every ruling and every non-decision. The role of the public administrator is a tough one as it is, but COVID-19 has made it that much harder.

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Appendix A

Key Informant Interview Survey Questionnaire

How has COVID-19 made it necessary to deviate the way the local government responds to a health crisis as outlined in the health crisis portion of the emergency plan?

To your knowledge, does the local government have performance indicators to measure the progress and efficiency of the response? If yes, what are they?

- Yes _____
- No _____

What are some SMART goals specific to the pandemic response that the local government aims for? SMART refers to goals that are specific, measurable, achievable, relevant, and time-bound.

What challenges have the local governments faced regarding its implementation of the response measures?

How is the response budget being maintained and monitored?

Rank your organization's resources level on a scale of low, moderate, or high.

If there was no interference from state or federal policy, would you adopt stricter response measures?

- Yes _____
- No _____

Appendix B

Public Survey Questionnaire

Local government will refer to the governments of the City of Laredo and Webb County

Do you currently live in Laredo or Webb County?

- Yes
- No

How satisfied are you with the local government's response?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

What do you think of the local government's response when compared to other cities?

- It is better than others
- It is worse than others
- No difference

How satisfied are you with the local government's community engagement on COVID-19?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

What do you think of the local government's community engagement on COVID-19 compared to other cities?

- It is better than others
- It is worse than other counties
- No difference

How concerned are you with the local government's ability to combat COVID-19?

- Very concerned
- Somewhat concerned
- Somewhat unconcerned
- Very unconcerned

Do you have any suggestions for the local government regarding the COVID-19 response?

Appendix C

Figure C1. Levels of satisfaction among citizens regarding the local government response.

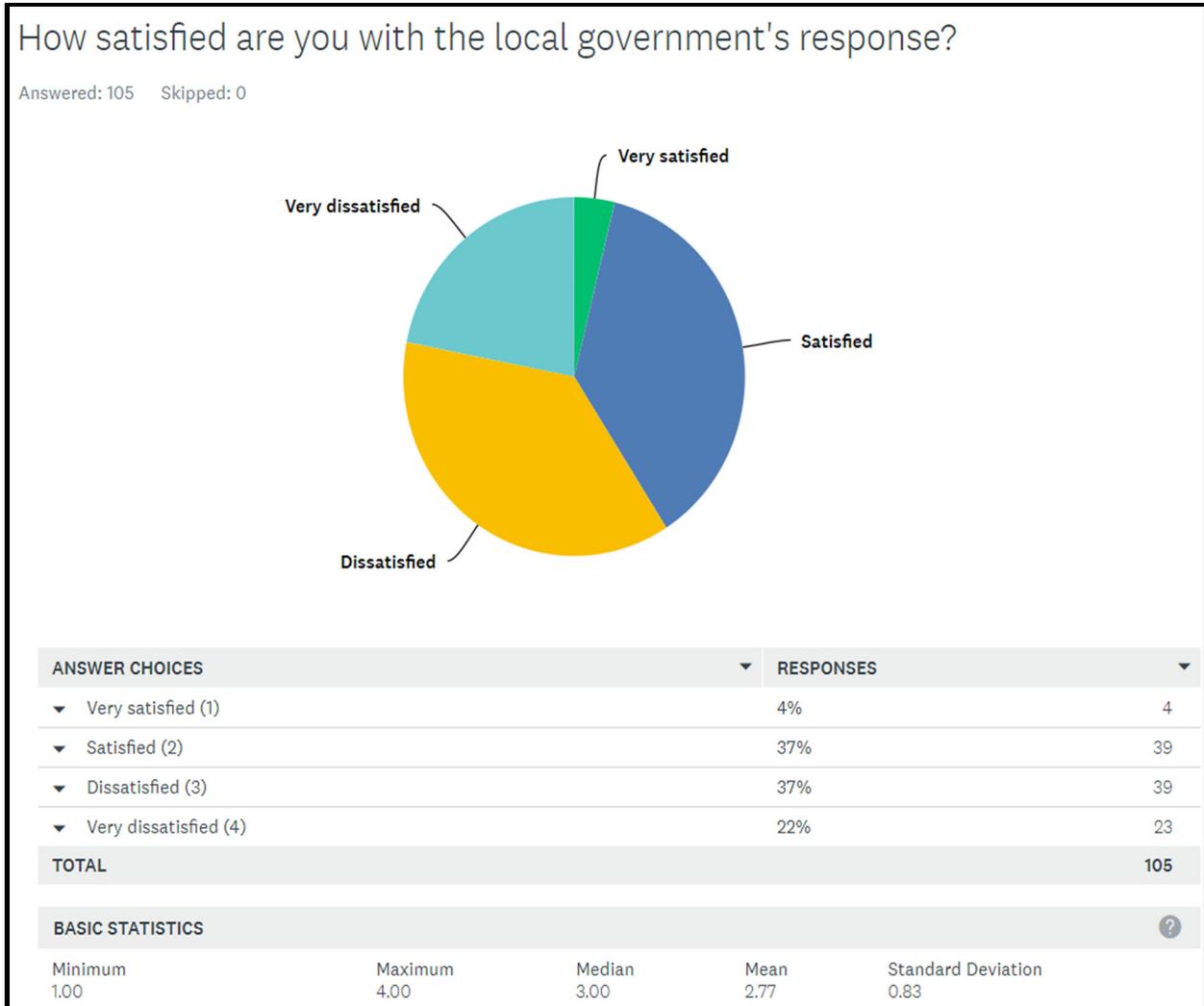


Figure C2. Comparison of the local government’s COVID-19 response to other cities.

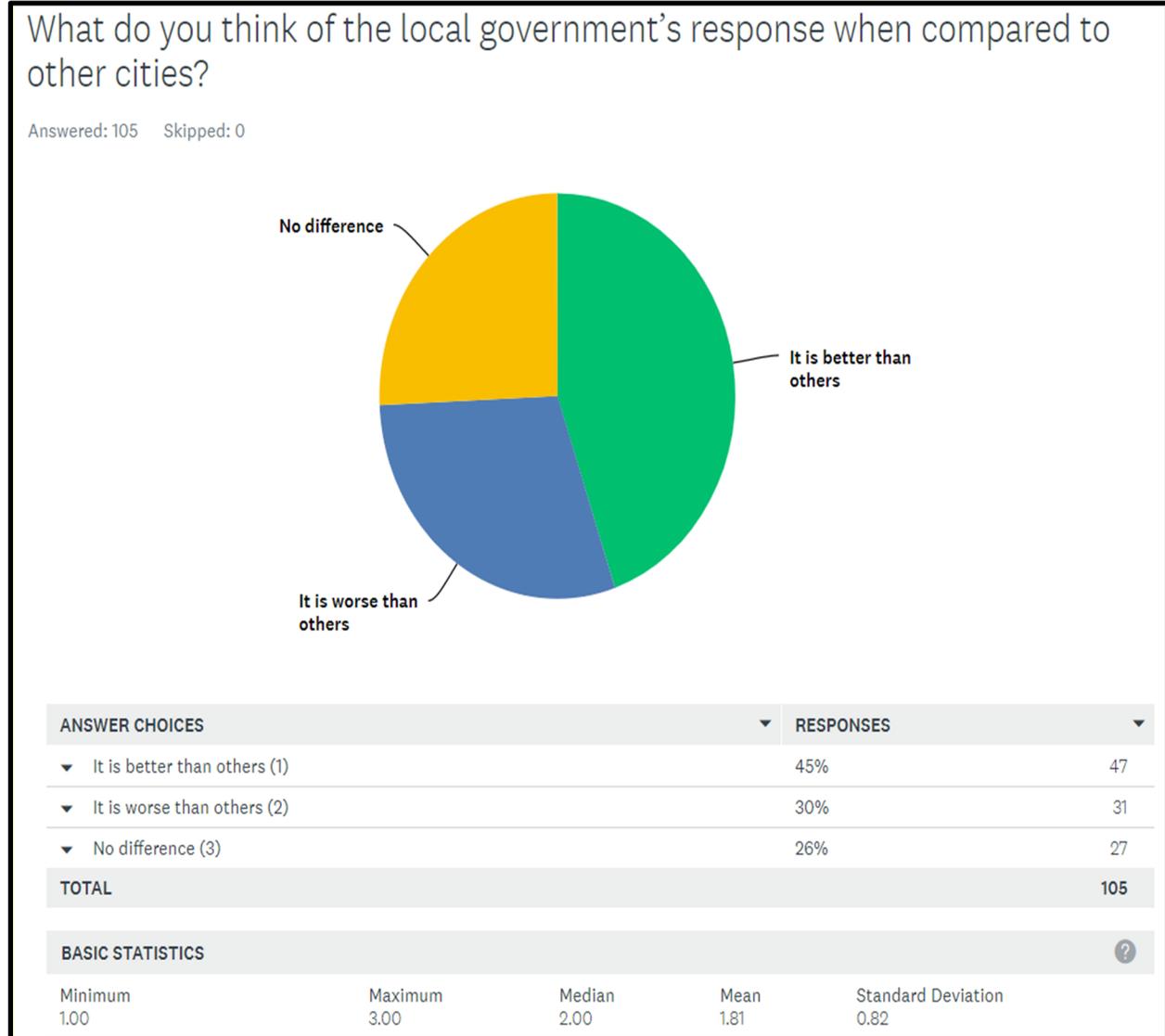


Figure C3. Levels of satisfaction among citizens regarding the local government’s community engagement on COVID-19.

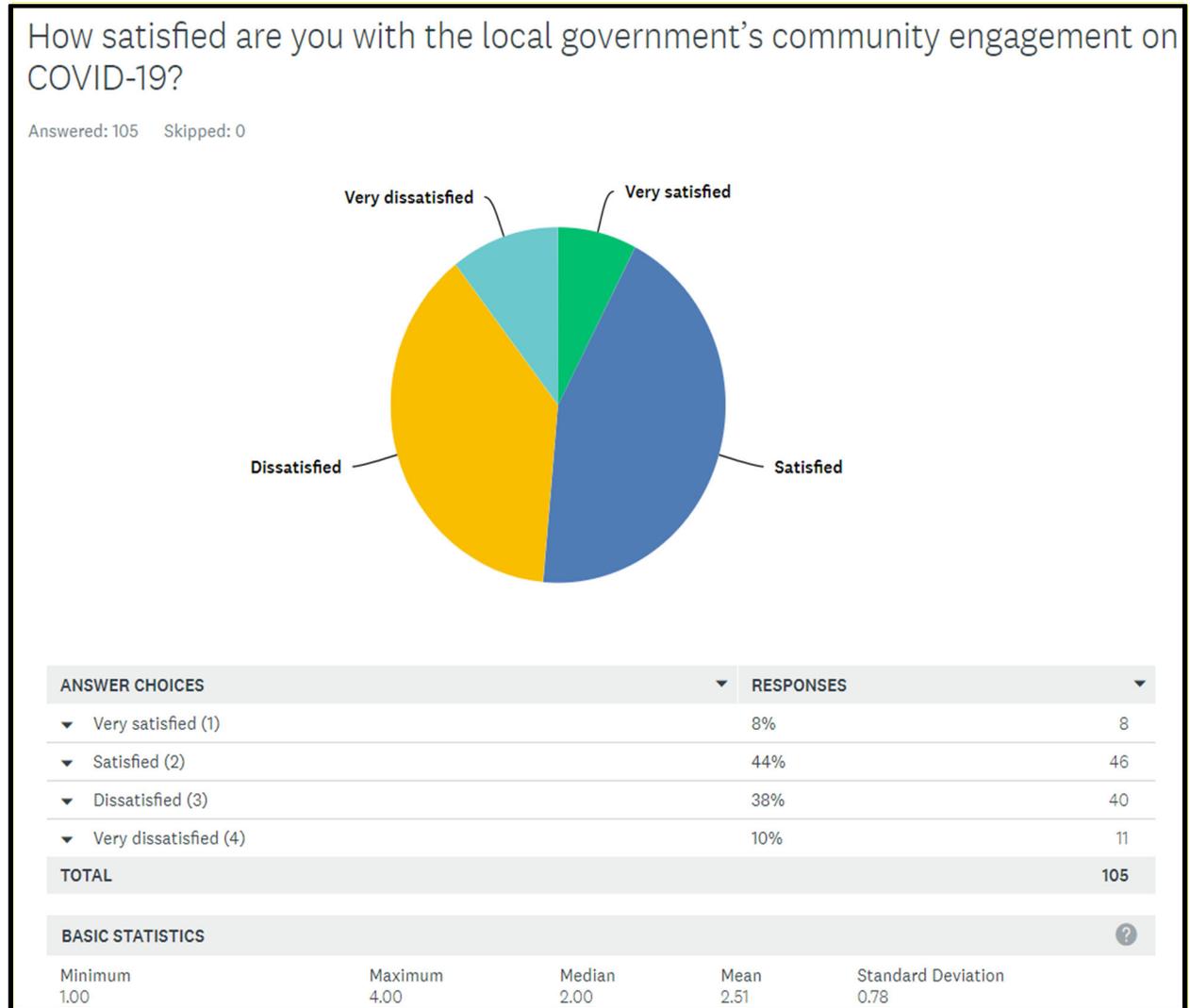


Figure C4. Comparison of perceptions regarding the local government’s community engagement on COVID-19.

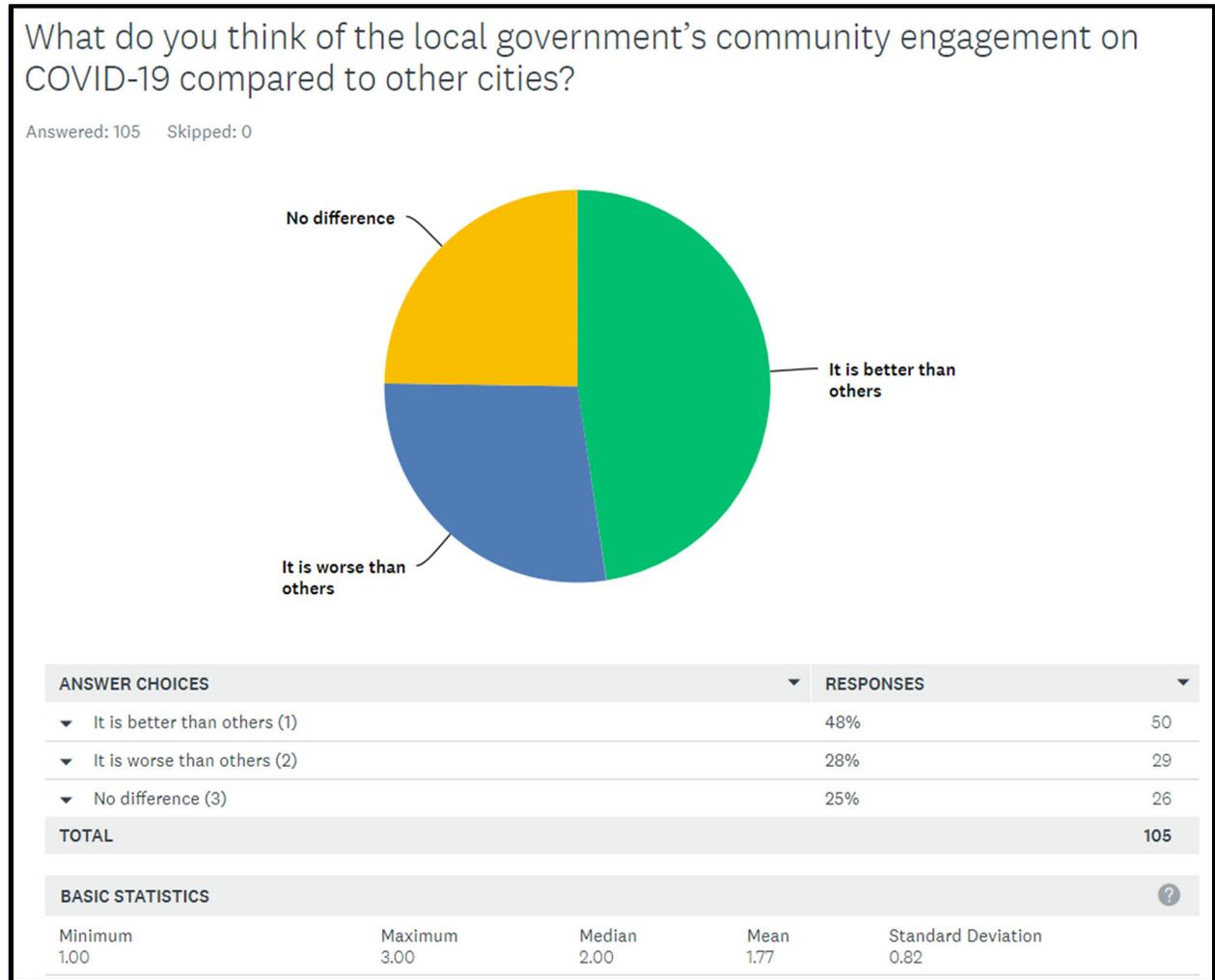


Figure C5. Levels of concern for COVID-19.

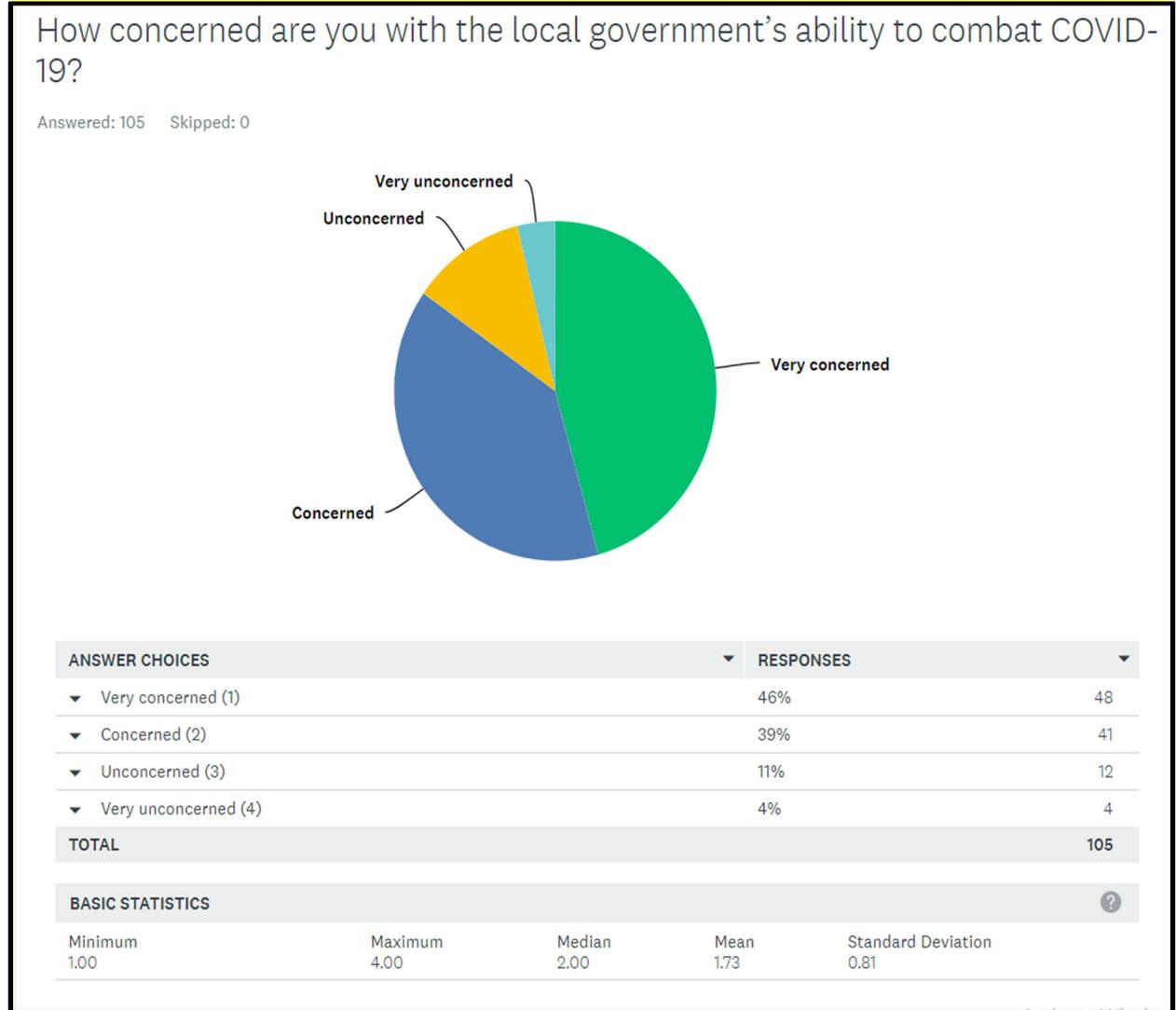


Figure C6. Word tags associated with the responses to the short answer question.

