



The attitudes of the patients of the good news clinic toward the COVID-19 vaccine rollout

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ABSTRACT

Worldwide, various sentiments about the COVID-19 vaccine rollout have been observed. This study has explored the sentiments and other factors affecting the response to the vaccine rollout in a community called Gainesville in Georgia, USA, and establishes the attitudes of patients presenting at a free clinic within the community which bears a comparable semblance to the racial/ethnic makeup of the greater community of Gainesville. Questionnaires printed in both English and Spanish were given to patients using the convenience sampling method and after a five-week period, 200 responses were analyzed using SPSS version 21 statistical tool. A major observation was the significant representation of Hispanics at the clinic, a somewhat comparable reflection of the ethnicity's representation in the Gainesville community. Another acknowledged and significant determinant of the vaccination status was the concern of health as expressed by the patients. A major challenge that affected data analysis was the non-completion of responses to questions due to challenges with full comprehension of the questions posed, despite the Hispanic written version of the questionnaire, this could be due to another major finding of a relatively high percentage of "high school and below" as the highest attainment of education of this patient cohort. This study thus brings to focus the importance of addressing the Hispanic population within this community in the most efficient manner as this in turn can significantly affect not only herd immunity but also other healthcare concerns of this community.

INTRODUCTION

As the global pushback against the SARS-CoV-2 virus remains the top priority in the health sector, the ultimate goal is to bring the COVID-19 pandemic under control, by attaining considerable global herd immunity.(1) A major milestone during the pandemic has been the rollout of vaccines to combat the infection. In the US, during the first quarter of 2021, three vaccines (two mRNA vaccines, produced by both Pfizer and Moderna, and one viral vector vaccine, produced by Johnson & Johnson's Janssen) had been approved and recommended for administering to the adult population in all communities, having met Safety and Effectiveness requirements to obtain FDA's Emergency Use Authorization for the prevention of COVID-19.(2-4) In response to this campaign, there have been observed sentiments among the public, which ultimately have resulted in various attitudes towards the rollout and administering of these vaccines. Some research studies carried out within certain regions and communities have identified some of these sentiments and possible factors associated with them which have resulted in some of the perceived attitudes towards the rollout and administering of the vaccines. (2,5)

Although the study on the patients of the Good News Clinic hopes to identify the general perceived attitude among this patient population.(3) towards the vaccines, explore possible factors associated with these attitudes, and thus shed light on those unique factors and influences about the attitudes of this patient population. We also hope to establish the connections between this patient population and that of the greater community of which it is a part of. Thus, based on certain similarities observed, solutions addressing the issues and concerns within this patient community can also be projected onto the greater Gainesville community. Thus, the findings could be relevant for the use by the community healthcare policymakers to strategically address issues specific to the uniqueness of the community in hopes of solving problems of the community healthcare system and with regards to the pandemic, causing a positive impact on herd immunity to the COVID 19 infection.

AIMS AND OBJECTIVES

This study aims at

1. Exploring the general sentiment revolving around the perceived attitude of the patient cohort towards the COVID-19 vaccine roll-out.
2. Establish the general attitude displayed by the patient cohort towards the COVID-19 VACCINE.
3. Identify various factors and influences that attribute to the perceived attitude towards the COVID-19 vaccine roll-out.

4. Identify which of the factors are of significance in causing the perceived attitude towards the vaccine and establish which are of relevance to the Gainesville community.

Based on the above findings, proffer solutions that may address issues and concerns of the cohort and hence the community, to encourage attitudes that arise from well-informed decision-making by community members.

METHODS

This was a cross-sectional study that collected data from adult patients (n=200) receiving care at the Good News Clinic, Gainesville.

A structured questionnaire was used to collect information over five weeks from July 5th through August 6th, 2021, by way of Convenience Sampling. All questions answered were assessed as a valid questionnaire. Approval of the study was granted by the board of the clinic.

Information collected and used in this study included socio-demographics, pre-existing medical conditions, knowledge and awareness of COVID-19, and COVID-19 vaccination.

The first question on the survey asked about knowledge of COVID-19: "How well informed are you about the COVID-19 virus" The response options were: high/well informed, average, low/not well informed, and unsure. Next, we asked two questions to assess the impact of COVID-19. First "How would you rank the impact the COVID-19 virus has had on you" with response option: High, average, low, unsure. Second, "Has the COVID-19 virus affected you in any of the following ways" with response options: Illness, illness of a loved one, death of a loved one, unsure. A final set of questions asked about COVID-19 vaccination.(6) "Have you received a COVID-19 vaccine" with options for yes or no. We also investigated the reasons for COVID-19 vaccine hesitancy. All respondents who answered "no" were presented with follow-up questions asking whether they have been busy, but intend to take the vaccine eventually, are waiting to see the outcome of the vaccine within the community, are concerned about the effects of the vaccine, or do not believe in the benefits of the vaccine.

Data were analyzed using SPSS 21 (IBM Corp). We computed descriptive statistics to describe the demographic characteristics of the study participants.

Next, knowledge and awareness of covid-19 were computed across groups and crosstabs. Responses were compared for various sociodemographic characteristics.

Study Location

Our study, took us to a particular setting in the Gainesville community of Georgia state. The Good

News Clinic. This clinic is a religious-affiliated nonprofit organization with the mission to provide free medical and dental care to patients of the community, who are unable to afford the purchase of health care services. The Gainesville community itself had witnessed several impacts, especially during the early stages of the pandemic, that had placed a burden on its healthcare system. A scenic illustration of this burden was the propping up of make-shift-pods and tents, set up by the Northeast Georgia Medical Center, to accommodate the overflow from the in-patient facilities, due to the overwhelming number of patients that had been admitted to the center, during this time frame. Also, scores of deaths that had resulted from complications of the COVID-19 pandemic, had been reported at the same time. Such observances thus prompted this Study as it would be interesting to note the attitudes within the community towards the COVID-19 vaccines as they were made available to the public.

The Outstanding Attribute of this Population

The demographic profile which reflects the predominance of the Latino ethnicity stands out during the analysis. Making up 45.00% of the respondents, the general response to survey questions tends to shift towards the responses made by this group.

RESULTS

Table 1. Racial/Ethnic Group Distribution of Patient Cohort Presenting to the Goodnews Clinic

Race/Ethnic group	Frequency	Percentage
Asian	13	6.50
Black/African American	16	8.00
Hispanic	90	45.00
White/Caucasian	76	38.00
Unaccounted group	5	2.50
Total	200	100

Table1; Showing in percentage, the racial/ethnic distribution of patients. With the Hispanic community reflecting a predominance at 45%.

Table 2. Racial/Ethnic Group Distribution from Gainesville, Georgia (April 2020)

Race/Ethnic group	Percentage
Asian	2.70%
Black/African American	16.30%
White/Caucasian	40.20%
Native Hawaiian and other Pacific Islander	0.00%
Hispanic	38.10%
Multiracial	12.30
American Indian/Alaska Native	0.50%

Table 2; The table shows extracts from the April 2020 census according to the US census bureau. It reflects a 38.10% representation of Hispanics in the Gainesville community of Georgia. Being the second most represented group according to the chart, one can argue a semblance with the represented patient cohort of the Good News Clinic, Gainesville.

Table 3. Vaccination Status of Patient Cohort of the Good News Clinic, Gainesville

Vaccine status	Frequency	Percentage
Unvaccinated	75	37.50
Vaccinated	115	57.50
Unaccounted group	10	5.00
Total	200	100

Table 3; Shows the numbers and percentages of the vaccinated and unvaccinated patient cohorts at 57.50% and 37.50% respectively. The 5% unaccounted for the cohort were those who did not respond to this question, though participated in the study.

Table 4. Vaccinated Population Based on Racial/Ethnic Distribution

Race/Ethnic group	Frequency	Percentage
Asian	5	4.35
Black/African American	8	6.96
Hispanic	57	49.56
White/Caucasian	45	39.13
Total	115	100

Table 4; Of the 115 patients who were vaccinated, 49.56% were of Hispanic ethnicity, showing the relevance in terms of the representative count of this patient group in this study.

Table 5. Unvaccinated Population Based on Racial/Ethnic Distribution

Race/Ethnic group	Frequency	Percentage
Asian	8	10.67
Black/African American	8	10.67
Hispanic	29	38.67
White/Caucasian	30	40.00
Total	75	100

Table 5; the numbers reveal that the Caucasian race was mostly represented in this category with 40.00% of the unvaccinated. We can argue that the Hispanic ethnicity still holds a significant representation with 38.67%. This highlights their relevance in impacting the trends of observed attributes in the clinic (and hence the community).

Table 6. Unvaccinated Population Based on Educational Status

Educational status	Frequency	Percent
High school or less	56	74.66
College	10	13.33
Postgraduate	5	6.67
None	4	5.33
Total	75	100

Table 6; Showing the “Highschool and Below” category under educational status, recorded the most observed in the group of unvaccinated patients with a percentage representation of 74.66%.

Table 7. A Focus on the Race/Ethnicity of Patients with High School and Below Educational Status

Race/Ethnic group	Frequency	Percentage
Asian	7	5.11
Black/African American	10	7.30
Hispanic	69	50.36
White/Caucasian	51	37.23
Total	137	100

Table 7; This table highlights the Hispanic ethnicity as the most represented under the category of the “Highschool and Below” demographic, with a representation of 50.36%.

Table 8. Influence of Personal Perception on Vaccination

Reason	Vaccinated	Unvaccinated	Others	Total
Health	70	17	X	87
Religion	1	4	X	5
News and/or social media	5	15	X	20
Total	76	36	88	200

X represents an unknown number in this category.

Table 8; This table reveals a major limitation of this study as the unaccounted group comprised 44%. The unaccounted group means this question was not filled in. However, for those that responded, the most identified concern was in the category of “Health reasons” with a percentage of 43.50% (87).

DISCUSSION

A hint of the attitudes towards the rollout of the various vaccines against the sars-cov-2 virus, globally, was sensed by the various sentiments that were expressed concerning the vaccines. Amongst these sentiments, were that of enthusiasm, especially for those who felt highly impacted by the pandemic, perhaps through experiencing personal illness, or the illness of a loved one, or even, the death of a loved one, however, on the other end, was the feeling of concern and mistrust about the safety and efficacy of the vaccine, with the sense that not much time had been invested in the development of the vaccines.(7) With such sentiments arose the attitudes that currently plague the pandemic, the attitudes of acceptance and hesitancy. These attitudes are being encountered on a global scale. Our study has ascribed to the attitude of acceptance, enthusiasm, and ready willingness to take the vaccine while hesitancy is ascribed to the display of unenthusiasm, manifesting as delay, indecisiveness, and unwillingness in receiving the vaccines.(23) It should be noted that for 8. the purpose of this study, the terms denoting attitudes of acceptance and hesitancy, are limited to the description above, indeed, the term hesitancy, has been noted to embrace a spectrum of attitudes from full acceptance to complete refusal, in

some other studies. Thus, for this study, the attitude of acceptance will be excluded from the spectrum and emphasizes the response of having been vaccinated. In encountering the attitudes of acceptance and hesitancy displayed among the patients of the GNC, our quest in this discussion is to provide an insight into the attributes of this patient community, causing these attitudes and the perception towards the vaccines that bears responsibility for the perceived attitude.

So far, on the global scale, several factors have been identified as having an impact on the sentiments that yield these attitudes. Some studies demonstrate how demographic factors such as age, sex, racial/ethnic group, education, and socio-economic, have influences on these attitudes and how these factors at times could show variations in different geographic settings.(19) Although our study did not establish a significant P value, when factors were analyzed, there is arguably a relevance to the findings highlighted in the results, as this discussion would reveal. The trends that have been observed in this study, are 9. necessary as they help healthcare investors/policymakers strategically proffer solutions that address issues such as cultural norms, language barriers, mistrust in healthcare systems experienced by some minority groups and the list goes on. The data analysis from our survey brings to light the unique qualities/ attributes of this patient population that will enable a specific approach in addressing their concerns and perhaps in areas where these approaches could be projected unto the community, due to the semblance between the clinic and the community in which it is a member of, such recommendations can be made.

Of the 115 respondents that acknowledged they were vaccinated, the Hispanic community made up

49.56%, that is, almost half of the vaccinated respondents! The influence is seen the other way as well, in the hesitant category, although the data analysis reveals within each 10. racial/ethnic subcategory, the Asian representation has the highest display of hesitancy of 61.53%, however, this only accounts for 10.6% of all the unvaccinated, being surpassed by the Latino ethnic which bear 38.67% of all unvaccinated and the Caucasian race displaying the most unvaccinated, bearing 40% of unvaccinated.

This observation highlights the possible impact and influence of the Hispanic community not just within the clinic, but the Gainesville community, where they make up 38.10% of the ethnicity, according to the US census bureau, April 2020. This does not assume any less significance, nor does it undermine the needs of other identified groups including minorities within this community. However, it emphasizes a possible shift in paradigm that could be achieved by strategically targeting messages that address the concerns of this group, especially those that will yield socio-economic and health benefits, perhaps towards increasing herd immunity regarding the pandemic.

Another unique finding is the number of respondents identifying in the category of high-school and below in highest attainment of education. These comprised 74.66% of the unvaccinated respondents. It might also be important to note that 50.36% in this category identified as Hispanic. Perhaps, when considering educational status as an indicator of socioeconomic status and, low socioeconomic status as one of the criteria for admission into the clinic, this finding is not surprising. However, unlike in the previously highlighted category, the high numbers of respondents are not a reflection of the demographic profile for the education of the Gainesville community.(8-12) Nevertheless, addressing the concerns of this demography can go a long way in impacting the general well-being and with regards to the pandemic, boosting the impact on herd immunity. In bringing to observation, the probable influence of the Hispanics in this category, perhaps campaigns geared at addressing the language barrier with a simplistic approach, could go a long way to proffer solutions addressing concerns in this category.

Aside from demographic attributes, the study sheds some light on possible influences on attitudes that could arise from the concept of perception, i.e., perception of personal impact brought upon by the virus. An important finding was the possible influence on the health status of the individuals. Of respondents that specifically identified influences on "health", "religion" and "news/media", 77.67% of these acknowledge, health as the most reason influencing the choice of their vaccination status. A possible inference that could be made from this, is the importance of personal health on choices that affect individual well-being. This highlights the role and importance of media campaigns in the dissemination of health information

and perhaps the tunneling of messages that not only focus on the safety and efficacy of vaccines, nor place emphasis on several sicknesses and deaths, but perhaps an emphasis on transparency on the impact vaccines have had on individuals especially those with pre-existing medical conditions. The objective here is not to coerce subjects who are hesitant, into receiving the vaccines, but to allow them to make well-informed decisions about their health, about their choices on vaccines.

The above observations and recommendations have been stated based on findings as at the time of the conduct of this survey, August 2021. With evolving trends in the prevalence of virus variants, vaccine regimen recommendations, and vaccine mandates imposed by some groups, organizations, and governments, it will be correct to assume there also would be the observation of an evolving change in the trend of the attitudes. Hence, ongoing studies will continue to be recommended. Studies like these, though conducted on a local scale, could serve as a reference for other ongoing studies, to observe for changes and advocate for more recommendations.

Limitations

The design of the questionnaire was deliberately truncated and aimed to;

1. Engage patients during their wait time, before their encounter with their primary care provider.
2. Researchers were as brief as possible, to encourage more participation, hence straight to the point. For this reason, questions were limited to only asking if any vaccine had been taken. It did not probe further on which vaccines and several doses.
3. There were English and Hispanic versions, some respondents of the Hispanic version expressed difficulties in fully comprehending the questions and thus did not fully engage in their questionnaires, this results in a category of "unaccounted" under some variables, in our results.

Overall, the results of the above-mentioned limit us to interpreting Acceptance as respondents who had taken the vaccine and Hesitancy 14. as respondents who had not taken the vaccine. It should be pointed out here that several other studies would class those who had not fully been vaccinated with a second dose (as at the time of this study) as hesitant. Thus, the description of attitudes assigned to respondents of this survey is strictly for this survey. Secondly, although there were considerable numbers of Hispanic respondents that were subjected to the survey, due to the lack of an interpreter, a considerable data information was left out due to Hispanic respondents not fully understanding questions and how to put them in writing. Finally, at the time at which the survey was conducted, some possible

respondents opted out of and avoided participation purely on discovering the survey involved the subject of COVID - 19 vaccines, this might have been due to pre-conceived misinformation, these non-respondents, I would describe as a "silent category", most likely would have identified as hesitant and their concerns would have been interesting to know but were never expressed.

Another limitation, aside from the aforementioned variables, is that several others will have implications on perceived attitude towards the rollout of the vaccines, e.g., financial implications, peer 15. influences, political affiliations, etc. that were not explored. Thus, limiting our projections and recommendations to ideas that were only expressed in the survey.

A recommendation, therefore, is for a more elaborate questionnaire designed to accommodate specifically an audience whose subjects mostly have a language barrier and thus require aids for interpretation and also have questions that throw more light on vaccination status and introduce more variables that might pertain to the time, e.g., reflecting on policies involving mandates, etc.

Conflict of Interest:

Authors have declared that there was no conflict of interest.

Grant:

The researchers received no grant for the study.

Ethical Consideration:

Subjects for the research consented to the study in accordance with Hensinki declaration (revised 13th edition)

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