

Assessing mental health and technology use in the time of COVID-19 among farmworkers in the U.S. – Mexico border

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Abstract

Purpose – The purpose of this paper is to present findings on a community-based participatory research project where the authors examined access and ability to use technology, attitudes and perceptions of technology, and COVID-19 and mental health beliefs in the time of COVID-19, among predominantly Hispanic/Latinx farmworker males residing in the US–Mexico border city of El Paso, Texas.

Design/methodology/approach – This paper used a qualitative narrative analysis which consisted of in-person interviews in Spanish with male farmworkers ($n = 10$) between the ages of 49–60 years. This paper applied a research approach designed to engage researchers and community stakeholders as equal partners with the goal of improving practice.

Findings – Of the participants, eight reported having a phone and only three reported knowing how to use the internet. Before the COVID-19 pandemic, the participants reported living a relatively stress-free life. When the pandemic impacted their community, they reported experiencing heightened anxiety and stress. To relieve stress, all participants used healthy coping strategies (e.g. walking and gardening).

Originality/value – The findings suggest that farmworker males are receptive to obtaining mental health services. In addition, they would benefit from resources highlighting healthy stress coping mechanisms. Due to their limited knowledge of current internet technology, efforts on how to promote and deliver mental health services and resources to farmworkers should be strategic and appropriate.

Keywords COVID-19, Technology, Mental health, Farmworkers, Community-based participatory research, US/Mexico border, Males, Hispanics, Latinos, Spanish, Agriculture, Cell phones

Paper type Research paper



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Introduction

The COVID-19 pandemic is a global pandemic derived from a virus causing respiratory illness that spreads from person-to-person. It was declared a national emergency on March 13, 2020, which then drove quarantines, product shortages and business closures. The food supply, however, was stabilized because it is one of the few systems that must be maintained to ensure food security. Thus, food chains remained open and uninterrupted (Béné, 2020). As a result, migrant populations (i.e. farmworkers and agricultural workers) have been at a higher risk to COVID-19 infection (Ramírez-García and Lozano Ascencio, 2020). Despite adversity, they continued to work during the pandemic outside of their homes. Yet, whereas their work was deemed essential, there were numerous reports of inadequate protective measures put in place, including working in constricted spaces and with limited to no access to personal protective equipment (PPE) (Hernandez *et al.*, 2022). The centers for disease control and prevention (CDC) recommendations were difficult to observe by farmworkers, as they work in groups, have labor-intensive outdoor jobs, with little to no access to hand washing stations out in the fields.

El Paso, Texas located on the US–Mexico border, is a predominately Hispanic community with approximately 83% of the population being Hispanic/Latinx and one in five El Pasoans living in poverty (U.S. Census Bureau Quickfacts: United States, 2024). It is estimated that there are 928 farmworkers in El Paso County, based on the 2017 Census of Agriculture [National Center for Farmworker Health, 2021]. Texas is a major sending state for migrant workers in the USA. Consequently, workers may spend part of the year in Texas working in agriculture, then migrate to other states during the planting and harvesting season. Migrant workers tend to travel in migratory streams depending on weather and crop conditions.

COVID-19 and Hispanics/Latinx

COVID-19 has impacted historically vulnerable communities with health inequities affecting the health of the Latinx/Hispanic community (Macias Gil *et al.*, 2020). The number of hired farmworkers in the USA is roughly 1.18m, more than half (51%) are Hispanic/Latinx (Isaacs, 2020). In the USA, Hispanics make up roughly 18% of the total US population and according to the CDC, as of May 20, 2020, this population made up 28.4% of COVID-19 cases (Macias Gil *et al.*, 2020). In October 2020, El Paso made national headlines with COVID-19 deaths and infections that plagued the county and surrounding areas (Samuels, 2020). These numbers are suspected to be the result of a high number of essential workers, lack of access to quality health care and preexisting health conditions (Chang *et al.*, 2021).

Nationally, 45.2% of the country's workers are considered critical (or essential) employees. In Texas, essential workers make up 44% of the workforce, with the highest essential industry being food and agriculture (United Way NCA, 2021) and 31% of those essential workers being Hispanic (University of Illinois Chicago, 2021). As a result, they are faced with an unfavorable choice, keeping a source of income whereas increasing their exposure to COVID-19 and the likelihood of spreading the virus to their loved ones (Perez and Caceres, 2020). Essential workers' pre-existing conditions have been associated with their physically demanding jobs (i.e. dynamic strength, bending or twisting, kneeling or crouching, handling or moving objects, significant time standing or walking) leaving workers more susceptible to COVID-19 infection (Jin Rho, 2020).

Farmworkers and challenges

Migrant farmworkers typically travel annually to work in private agribusinesses, making it difficult to provide care to a transient population even more so with a shortage and low retention rates of health providers (Ortega-Vélez *et al.*, 2016). Language barriers have restricted the efficacy of public health messaging resulting in inadequate inpatient care (Macias Gil *et al.*, 2020). The Office of Minority Health states that 29.8% of Hispanics report they are not fluent in

English (Macias Gil *et al.*, 2020). Despite a patient's legal right to receive medical care in their language of origin and existing federal standards for culturally and linguistically appropriate services, there are no requirements or guidelines that exist for medical Spanish educational resources (Ortega, 2018). Many health risks are visible and can be treated when diagnosed. Latinx farmworkers experience challenges that are different from the general Latinx population because their occupation, place of residence and lack of technology access.

Mental health is one of the poor health outcomes that is not visible and goes underdiagnosed. Consequently, clinical and systems-level health promotion strategies may be required to mitigate stressors in border-residing farmworkers. Many Hispanic/Latinx food and agricultural workers were struggling as they expressed their frustration when accessing COVID-19 vaccines, because there were limited hours of operation of vaccination events and lacked childcare (Hernandez *et al.*, 2022). Connections to health care for farmworkers is limited by their rural geographic location, language barriers as well as barriers to access the internet.

Mental health

A recent study found that rates of mental health care were underutilized by Hispanic adults by less than half the rates of those of White adults (Thomeer *et al.*, 2023). Such rates could be the result of barriers (i.e. financial, geographic, cultural and linguistic obstacles) which could lead to discrimination by mental health-care professionals by making it difficult for Hispanics to secure mental health appointments and resulting in episodes of mental illness that may go untreated for long periods of time (Thomeer *et al.*, 2023). Latino farmworkers are a vulnerable population who confront multiple threats to their mental health, as Hispanic/Latinos were socialized to reject and deny the existence of mental illness (Caplan, 2019). Barriers and stigma may result in lack or underutilization of mental care which could then exacerbate mental health issues and compound to the mental health needs of Hispanic/Latino farmworkers. A study by Crain *et al.* (2012) found a substantial number of farmworkers in North Carolina have poor mental health, as indicated by elevated depressive symptoms (52.2%) and anxiety (16.4%). Another study in eastern North Carolina, (Grzywacz *et al.*, 2011) found that elevated depressive symptoms were risk factors for work-related incidents and injury in manufacturing and agriculture, however, understanding accidents and injury risk factors for immigrant Latino farmworkers in agriculture remains underdeveloped. A 2020 study found that Latino farmworkers were having suicidal thoughts and ideation four times (23%) more than non-Latino Black (5%) and White (5%) farmworkers who were asked if COVID-19 had impacted their mental health (Mora *et al.*, 2022). This demonstrates the negative impact that the pandemic has had on mental health, especially on farmworkers.

Technology

To those with internet access, there was abundant information posted online during the pandemic. Yet, many farmworkers did not have access to important resources provided by state and local governments, health department websites and outreach worker organizations. As a result, they could not keep up with the latest health-care information (Lee *et al.*, 2020). Having current information from reliable sources can mean the difference between decelerating the spread of coronavirus or accelerating the spread of illness causing unwanted deaths among the most vulnerable (Lee *et al.*, 2020). However, no information was found in the literature concerning the efficacy of outreach services using technology or if farmworkers were using technology to find locations where health services were provided (i.e. vaccines and mental health services).

Maintaining effective communication with farmworkers in the mid of the pandemic was difficult, because our region's social distancing regulations and limited internet access. Moreover, their housing situation also poses a challenge for reliable internet access. About 40 % of migrant housing is characterized as "hidden" as they live far off the road or behind other buildings (Donnelly-DeRoven, 2022). In El Paso County, housing complexes where farmworkers reside are off the main roads deep into rural towns away from public transportation, convenience stores, public libraries and community centers (where Wi-Fi access was available). The quality of society's response to a global pandemic depends on satisfying the communication needs of all populations, especially the most vulnerable.

Methods

This community-based participatory research (CBPR) study examined access and ability to use technology, attitudes and perceptions of technology and COVID-19 and mental health beliefs among farmworker, males, in the ages of 49 to 60 years, and were at that time residing in the US–Mexico border city of El Paso, TX. The overall goal of this study is to apply the findings to assist with the development of social marketing strategies to promote and provide mental health services and resources among farmworkers using appropriate communication channels and implementation strategies.

CBPR is an approach that is recognized as particularly useful when working with populations that experience marginalization (in our case farmworkers). It supports the establishment of respectful relationships with these groups, and the sharing of control over individual and group health and social conditions (Israel *et al.*, 1998). CBPR involves collective, reflective and systematic inquiry in which researchers and community stakeholders engage as equal partners in all steps of the research process with the goals of educating, improving practice or bringing about social change (Israel *et al.*, 1998). We applied a qualitative narrative methodology which consisted of face-to-face in-depth interviews in Spanish. A structured interview instrument containing 28 open-ended questions, was developed in English and Spanish. The university's institutional review board approved this study. Respondents were eligible to participate if they self-reported they were farmworkers, male, and between the ages of 49 and 60 years. The interview instrument (Attachment 1) examined attitudes and perceptions of technology (e.g. What prevents you from using technology to seek or access mental health resources available?), access and ability to use technology (e.g. Do you know how to use the internet?) and COVID-19 and mental health beliefs (e.g. When I say "COVID-19 pandemic" what images and/or thoughts come to your head?).

Project team, interviewer and note taker, notified participants about the study and general topics covered in the survey. Specifically, participants were informed that there are minimal known or anticipated risks associated with their participation (as some questions may cause discomfort), no direct benefit, no cost, answers are confidential and that taking part in this study was voluntary. Participants were then provided a printed informed consent form for research involving human subjects (available in English and Spanish) and were collected by project team when signed. If participants indicated discomfort, a list of mental health resources was available upon request. All interviews were conducted in Spanish; although project team was prepared to conduct them in English if necessary. Individual interviews lasted about 30 min, were recorded using a voice recorder application, and uploaded to a secure repository. Once a participant completed the interview, the research team thanked them for their time and compensated the participant with \$10 cash.

Completed Spanish interviews were transcribed and translated to English for coding and to generate common themes. Reading through these materials (interview responses) the researcher (project team) may isolate certain themes and expressions (Miles and Huberman, 1994).

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The research team transcribed and coded 5 h of qualitative responses that spoke about the experiences migrant farmworkers faced. In this study, coding was done by creating a codebook that contains themes of answers received. By using codes, the research team can understand from the priority population their attitudes, perceptions, access and abilities for design of future strategies to provide services and resources.

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Results

A small-scaled ($n = 10$) study was conducted with male, predominately Hispanic/Latinx farmworkers, ranging from the age of 49–60 years old, located in El Paso, TX (Table 1). Our research study sought to understand the attitudes and perceptions of technology, access and ability to use technology, COVID-19 and mental health beliefs. Because a possible lack of transportation, the research team conducted interviews in a nontraditional setting in a facility that supports agricultural workers (traditional settings being offices or laboratories).

Technology

This section of our study focused on attitudes and perceptions of technology and participant's access and ability to use the internet. Seasonal migrant farmworkers usually live and work in large geographical areas where Wi-Fi and phone reception are not readily accessible or reliable. In the height of the COVID-19 pandemic, state and local government, health departments and many offices relied on phone and internet usage. Scheduling doctors' appointments, researching health symptoms and vital information regarding COVID-19 was broadly accessible online. Those who lack the knowledge to navigate the internet were missing opportunities such as free at-home COVID-19 testing, PPE and vaccination events. A small pilot study conducted in 2017–18 showed that farmworkers that did not have technological access or knowledge fell behind the general population in not being able to access medical information or locate treatment. This aggregates to the increasing inability of farmworkers to understand and protect themselves from the

Demographic characteristic	%
<i>Sex</i>	
Male	100
<i>Age groups</i>	
40–49	10
50–60	90
<i>Primary language spoken</i>	
Spanish	100
<i>Ethnicity</i>	
Hispanic/latino	100
<i>Field sector</i>	
Agriculture	90
Orchards	10
<i>Typical work hours</i>	
Early morning	80
Nights	20

Table 1.
Participant
characteristics
($n = 10$)

Source: Authors' own creation

coronavirus (Lee *et al.*, 2020). In our study, eight out of the ten participants reported having a cell phone with internet access but unsure of how to open the browser and use the technology provided through their phones (Table 2). This included QR codes, a machine-readable code that is commonly used as a popular shortcut for registration (e.g. COVID-19 testing and vaccinations), locate medical information and obtain information on public health. Although six participants stated that they have seen QR codes around the city, the six reported difficulty in using them. In their field of work, advanced technology is not a necessity. Communicating in person and talking on the phone are the reported preferred methods of communication for all participants. Technology was described as a distraction and took away from important family time. One participant stated, “when our daughters are on their phones, it just seems like they’re more stressed and then don’t talk to anyone.” Unlike younger generations that use technology as a distraction to problems, eight of our participants were more likely to use work or quality family time as activities to reduce

Technology demographics	%
<i>Participant has phone?</i>	
Yes	80
No	20
<i>Participant has smartphone?</i>	
Yes	60
No	20
Not applicable	20
<i>Participant knows how to use internet?</i>	
Yes	30
No	70
<i>Participant knows what QR code is?</i>	
Yes	60
No	40
<i>Participant has seen QR code around city?</i>	
Yes	60
No	30
No answer	10
<i>Participant can access QR code?</i>	
Yes	20
No	80
<i>How difficult are QR codes to use?</i>	
Easy	16
Somewhat easy	16
Somewhat difficult	0
Difficult	64
<i>Preferred communication with supervisors?</i>	
Messaging	50
Talking on phone	20
In person	20
Facebook	10

Source: Authors' own creation

Table 2.
Technology
demographics ($n = 10$)

stress. When asked which activities were used during the COVID-19 pandemic, only one participant used social media as an outlet for reducing stress. Although he does use his phone more than the other participants, he reported having difficulty using QR codes and prefers simple technological tasks. Because our population having limited knowledge of technology, efforts need to be made to include their preferred communication style. When asked how Participant Two felt about QR codes, he stated that “for someone who’s not always using technology or doesn’t know how to use it very well, it can be a little difficult.” He also believed that using QR codes was a challenging task. Participant Seven reported that using the internet is easier without QR codes, even though he has knowledge on navigating the internet. However, Participant Three reported that he has seen QR codes around the city and has noticed that “those who use them, is typically easy for them.” An outreach project done by CITRIS Health showed the importance of individual outreach to older Americans who are stuck in the digital divide. The digital divide is a critical issue especially for at risk populations. After the introduction with trained professionals, their priority population was able to use technology with greater ease. Results show that a simple introduction to technology is perceived well and renders positive results. Hence, basic training on the use of technology, specifically accessing QR codes among farmworkers may lead to greater confidence on how to use them. It is vital to ensure that this population does not fall behind further with the understanding and use of technology. Seasonal migrant farmworkers often work in countries where their relatives do not reside. All participants reported using either text messaging, phone calls or both to connect with family and friends. Communicating through Facebook, texting and phone calls is vital to maintain relationships from across the border with family members and friends which has been associated with having a positive impact on their mental health.

Mental health

Conversations regarding mental health have been on the rise in the time of COVID-19 with an emphasis to understand the effect that stress, anxiety and depression have on the body. Minority populations experience a heightened sense of mental health issues, often with limited resources available. Migrant seasonal farmworkers have an increased risk of mental health concerns because their immigration status, policies and physically demanding jobs. The fear of deportation, stigmatization and language barriers are explanations this population has a difficult time finding medical assistance. Participants were asked how they managed stress before and after the pandemic, which also included understanding ideal coping mechanisms. Eight of our participants (Table 3) reported that before the COVID-19 pandemic, they were not stressed and did not have a need to practice stress relievers. When COVID-19 began affecting their community, nine out of ten participants (Table 3) did not know how to practice mental health strategies, leaving them with heightened anxiety and stress. With no guidance or professional help, they turned toward familial distractions, identifying spending quality time with their family as a coping mechanism. Of our participants, six used work as a coping mechanism as it allowed for distraction, whereas four used physical activities, such as walking and gardening, to reduce stress (Table 3). Those who used walking as a coping mechanism preferred to have a family member present to vent and decompress. Participant Two stated:

I would start fighting with everyone around me but then I started talking to my wife and she starts to tell me that I’m becoming irritable then we go talk somewhere and we vent, and we go walk around.

Mental health	%	Mental health and technology use	
<i>Would like mental health resources</i>			
Yes	80	31	
No	20		
<i>Trust most for stress relief</i>			
God	10		
Doctor	40		
Family	30		
Other	20		
<i>Spokesperson for stress management</i>			
Expert	50		
Wife	30		
Other	20		
<i>Motivation to seek help for stress</i>			
Family	50	Table 3. Mental health (<i>n</i> = 10)	
No motivation	40		
God	10		

Source: Authors' own creation

All participants understand that managing stress is important. When left unmanaged, these stressors can potentially cause unwanted attitudes and behaviors. Some challenges reported that hindered the participants' ability to reduce stress were money, no access to resources and not knowing where to start. During these stressful times, we wanted to understand who our participants were turning to for support. Three participants relied on family members for motivation and guidance through the pandemic. One participant believed in the guidance of God, whereas another participant relied on the vaccine and medical advice to make safer choices. Although some participants used the news or Facebook for information, half of the participants believed that a spokesperson for mental health should be an expert. A substantial number of our participants (seven) reported that they have never received information on mental health resources but would be interested if offered. One participant who did not want information on mental help had already sought out help in the past and used techniques to help his mental health. The participant stated that, "there was a time where I couldn't breathe, and I had to go to the doctor, but I feel good now and I have learned how to manage these anxiety attacks." His answers highlight that when introduced to mental health resources there are beneficial advantages that can be practiced daily. Another participant who has never received information on mental health stated, "I am looking, if there is information, I am willing to listen to it." Before the COVID-19 pandemic, the participants had a professional visit their living center and offered mental health services. With the suspension of the professionals' visits, these migrant farmworkers are unable to obtain resources to help their mental health. When asked how our participants would like to receive mental health information, eight answered that texting or phone calls would be the best method. Our findings support that this demographic has not been thoroughly introduced to mental health resources but would benefit from receiving help and that texting or calling would be the best way to deliver information.

COVID-19

In this section, we were interested in the participants' attitudes and perceptions of COVID-19. Seasonal migrant farmworkers face heightened risk of infection because their job requirements (i.e. classified as essential workers) and housing (i.e. close quarters). Many migrant workers live in small duplex housing that has limited ventilation and space. Their jobs often require close contact with people for many hours, which increases the spread of COVID-19. This interview started with trying to understand what COVID-19 meant to our participants. Each participant reported that sickness and death are associated with COVID-19 (Table 4). Participant Three answered, "sickness, a lot of sickness, actually I lost three people in my family to the virus. One uncle, one cousin, and a distant relative." Motivation to avoid infection and spend time with family was reported by each participant. We have established that family means a great deal for our participants, so these answers were not out of the ordinary for this community. COVID-19 has affected the mental health of our participants greatly. Before the pandemic, our participants reported they did not have stressors and lived a relatively stress-free life. During the pandemic, their mental health suffered greatly as they were afraid to go to work, become infected, and spread the virus to their families. Participant Four stated that, "I wanted to protect my son, that was the reason that I wouldn't go. I went very few times to work because I didn't want to come home and infect my child or my partner." Because this fear of infecting his family, he lost a significant amount of income and now worries about money. His answer was very similar to Participant Two who was, "afraid to go out to the street to buy something at the store." When asked what motivated Participant Six, he believed that "death was a strong motivator and you just had to keep going to work, if not you would die of hunger." He also used work as a stress reliever during the pandemic, although he reported that COVID-19 affected him economically with less work. To relieve some pressure from COVID-19, all participants used healthy coping mechanisms. Walking, gardening and watching soccer were reported as ways to distract themselves from the pandemic. Our results show that COVID-19 has

COVID-19	%
<i>Relied on for support during pandemic</i>	
Family	50
God	20
Vaccine	20
Other	10
<i>Reduce stress during the pandemic</i>	
Work	70
Family	10
Physical activities	10
Other	10
<i>Did COVID-19 affect mental health?</i>	
Did affect	60
Did not affect	40
<i>COVID-19 images</i>	
Infection	80
Worried about family	20

Table 4.
COVID-19 (n = 10)

Source: Authors' own creation

severely affected the participants' mental health and ability to decompress because fear of becoming infected or infecting their family.

Discussion

The COVID-19 pandemic is more than a temporary public health event; therefore, it is important to consider lasting consequences on mental health. There is much to learn about the long-term impact of the pandemic on mental health and implementation strategies for services and resource sharing (i.e. in-person, texting and calling). The purpose of CBPR is to emphasize the strengths of the priority community in all its phases to equitably involve their lived experiences and address their issues in order for researchers to provide relevant solutions (Vaughn *et al.*, 2016). CBPR provides a valuable theoretical, epistemological and methodological framework for communities and researchers to document and interpret local issues of concern collectively and in-depth, and to use that information to develop community-driven initiatives for addressing these problems (Duke, 2020).

It is important to note the cultural shift happening in the Hispanic/Latino male community toward stigma associated with mental health. Where it was once predominantly perceived as negative and untreatable, we have learned they are interested in mental health services. The priority population has designed their own approaches to mental health by spending quality time with their families, working as a distraction and staying physically active (i.e. walking and gardening). Although some participants have never received any type of mental health resource (i.e. information, counseling and referral), they are receptive to receiving information and managing their stress.

Results of this study found that COVID-19 heightened stress (e.g. irritability and shortness of breath) and anxiety within the farmworker population, caused by illness, loss of work and interrupted lifestyles. Whereas before the pandemic, farmworkers reported minimal stress with most of the participants indicating no emotional or physical tension. A silver lining brought forth by the pandemic was the critical issue of mental health and incorporating healthy mechanisms, especially among disproportionately impacted communities (i.e. Hispanic/Latino farmworkers) to the forefront of national discussion.

The methodology of this study allowed for English and Spanish communication, yet all participants opted for Spanish. This highlights the importance of linguistically appropriate information, as English proficiency may be a challenge. Recruitment and training of bilingual mental health providers is warranted. Also, acknowledging that there is no standardized process to assess the competency of medical professionals using Spanish in patient care; typically, Spanish proficiency evaluations are self-assessments (Ortega, 2018). In addition, ensuring that resources and services are available in Spanish, as there is a large percentage of Spanish monolingual speakers. Further affirming the need to promote and deliver mental health resources and services that are linguistically appropriate.

This population has limited access to technology and knowledge on how to use it warrants alternative methods of resource promotion, dissemination and implementation strategies. Most of our participants were not familiar with using their smart phones and preferred simple ways of communication, such as talking in person or over the phone. Future strategies may benefit from the use of technology combined with a trusted frontline worker (e.g. community health worker) to connect the farmworker to a professional online. In addition, another potential strategy could be developing material and resources designed for the spouse/family unit to further promote mental health services and delivery. Finally, offering telephone-based counseling may bridge the gap between migrant farmworkers and those needing therapy services.

Accessing mental health services or resources poses a challenge to those who do not have insurance, cannot afford out-of-pocket care and expenses, lack adequate transportation and

have a hard understanding of the English language. Whereas many factors can contribute to Hispanic/Latinx farmworker's poor mental health (i.e. wage theft, immigration and labor policies) they have not been systematically measured, the limited geographic scope of existing studies contribute to limited understanding of the problem, as most farmworkers studies have been conducted in eastern North Carolina (Furgurson and Quandt, 2020). It is important to note that there is limited evidence whether mental health is worse in farmers compared to nonfarmers, there is also a larger portion of studies done that identify psychological health disturbances were more common among farmers and farmworkers (Daghagh Yazd *et al.*, 2019).

The COVID-19 pandemic disproportionately impacted marginalized communities of color (i.e. Hispanic/Latinx farmworkers). Findings of this CBPR project, allows to document and interpret issues of collective concern and then use this information to develop strategies/initiatives for addressing mental health services promotion and delivery that are intentional for the priority population.

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About the authors

Michaela Dakota Castor received her Masters in Sociology and her Bachelors in Psychology at The University of Texas at El Paso. Her research interests include LGBT Q and minority studies, health disparities and homelessness. Her thesis focused on resources that LGBT Q college students need on the US/Mexico border. Michaela uses her educational background to expand the knowledge of high school and college students. She plans on pursuing a PhD in Cultural Education during the Fall 2024 semester. Michaela finished her NSF ASP IRE Fellowship which aims to employ graduate students into community college faculty. Michaela Dakota Castor is the corresponding author and can be contacted at: michaelacastor22@gmail.com

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