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Integration of a Culturally Appropriate Method of Delivering Health Information in a Non-Clinical Setting

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Cover Page Footnote

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ABSTRACT

Context:

A.T. Still University School of Osteopathic Medicine in Arizona (ATSU-SOMA) has an established partnership with Family HealthCare Network (FHCN). Initial meetings with the local community outreach department identified that a substantial majority of the Hispanic population served by this health center may lack access to health education. In particular, Spanish-speaking patients at the health center may face language barriers that impair the transfer of health education between the providers, patients, and their families.

Objective:

The purpose of this study was to provide health educational presentations in Spanish in order to improve health knowledge relating to women's and children's health. The goal was to equip participants with necessary health information so that they gain awareness of the importance of scheduling primary care visits for themselves and their families.

Methods:

Two health information sessions on women's and children's health were developed, translated, and advertised via flyers to Spanish-speaking attendees of FHCN Bailoterapia dance classes. Participants were recruited on a voluntary basis after passing out the flyers. During each session, participants first filled out a pre-survey. Next, they listened to a live presentation on either women's or children's health in Spanish. Finally, they completed the post-survey.

Participation entailed attending one of the educational sessions and completing a pre-survey and post-survey. Ordinal data were collected and outcomes were evaluated via a two-tailed t-test to assess changes in health attitudes, knowledge, and participant satisfaction. Each participant received a numbered packet and their responses to the health attitude questions were compared from pre- to post-presentation. The data from each presentation were independently collected in the same manner.

Results:

Forty-seven eligible participants all participated in the surveys. The completed survey rate was 100%. Survey findings showed an improvement in health knowledge after the presentation. Baseline knowledge and health attitude improvement for women's and children's health was 37.9% and 61.25% respectively. Paired t-tests yielded p-values of less than 0.0001.

Conclusion:

The model highlighted how delivering health information in Spanish can empower Spanish-speaking individuals in the community to feel confident in seeking healthcare. We learned from the project that participants displayed an improvement in health knowledge after the presentations. The program was effective in improving participants' knowledge of the respective health topics. On a community level, the affiliated health center also expressed interest in expanding this program to having more sessions. Other organizations and communities may have different

language barriers and thus require additional adjustments. Using this innovative approach to perform outreach and networking with various community organizations will allow new audiences and community members to be reached for future projects.

INTRODUCTION

Within the Central Valley of California, specifically, Tulare County, migrant and seasonal farm workers (MSFW) are part of a large Spanish-speaking community. The barriers to healthcare access impacting this group include language barriers and clinic hours of operation.¹ Limited access to healthcare can lead to a decreased likelihood of annual screenings and routine check-ups on preventable diseases. Without early intervention, these diseases can progress into chronic illnesses including diabetes, hypertension, obesity, and hyperlipidemia, which increase the risk for complications such as sudden cardiovascular death.

Common services requested by MSFW include pediatrics', men's, and women's care.¹ In a report that provides a profile of farmworkers and experiences during the COVID-19 pandemic in Monterey, Tulare, and Kern counties, California, the majority of the surveyed are Spanish-speaking and one-third of the respondents utilized health care services. Findings emphasized there is a need for ongoing training and information in farmworkers' preferred language.² In 2017, 62.7% of the population of Tulare County, California consisted of Spanish-speaking individuals.³

Also, in Tulare County, the childhood obesity rate is above the national average. For example, in 2014-2015, the obesity rate for children in the 5th grade in Tulare County was 23.3% compared to the national average of 17.4% for children aged 6-11 years old.^{3,4} Children with obesity have an increased risk of developing hypertension, hyperlipidemia, type 2 diabetes, and mental problems related to low self-esteem. Primary prevention for childhood obesity requires early intervention and improving health knowledge in areas regarding nutrition.

In addition to barriers to child health, recent studies have suggested that Latina women of childbearing age also face barriers to women's health. Latinos are the largest minority group in the United States and suffer a disproportionate burden of sexually transmitted infections (STIs) as compared to whites.⁵ Latinas are 1.7 times more likely than other racial/ ethnic minorities to develop high-risk Human Papilloma Virus (HPV) infection and hence have higher rates of cervical cancer as compared to African American and white women.⁵ Providing health education to vulnerable populations in their native language can lead to improved health outcomes. As such, the purpose of this project was to determine if providing health education in their native language of Spanish can improve knowledge in the Tulare County community

METHODS

Two health information sessions were developed, translated, and advertised via flyers to Spanish-speaking people who were regular attendees of the Family HealthCare Network (FHCN) Bailoterapia dance classes. The project was conducted on two separate days with one health session offered to those present before each dance class. Each health session was a 45-minute live presentation by ATSU-SOMA medical students. The first day's topic was Women's health primary prevention and the second day's topic was Children's health primary prevention. The

project used credible, peer-reviewed resources to provide information regarding screening, timing, and procedure overview, namely the American College of Physicians, American Council of Gynecologists, American Association of Pediatrics, CDC guidelines, and UptoDate. The curriculum was curated together by medical students. The presentations were reviewed and approved by multiple healthcare providers at FHCN.

Participants were recruited on a voluntary basis through flyers. The participants are based on the convenience of those who choose to attend the Bailoterapia program. The inclusion criteria were Spanish-speaking attendees of the Bailoterapia class. Although there was no gender or age restriction, the dance classes consisted of adult women.

During each health information session, participants first filled out a pre-survey. Next, they listened to a live presentation on either women's or children's health in Spanish, depending on the day. Finally, they completed the post-survey. The main tool of measurement was the survey packets that contained the pre- and post-surveys. The pre- and post-surveys were based on completed presentations and contained five questions each (Table 1). The surveys asked about health knowledge and interest. The survey packets were labeled with a numerical identifier for anonymous collection and distribution.

Ordinal data were collected in the manner of the level of satisfaction. Evaluation of the results was conducted by the principal investigator and sub-investigators. Outcomes were evaluated via a two-tailed t-test to assess changes in health attitudes, knowledge, and participant satisfaction. Participants' responses to the health attitude questions were compared from pre- and post-presentation. The data from each presentation were independently collected in the same manner. The ATSU-Arizona Institutional Review Board approved non-jurisdiction on January 13, 2022.

RESULTS

There were a total of 47 participants. Data from each of the two health information sessions were collected after each session. 100% of participants completed both a pre- and post-survey. Baseline knowledge was compared based on the pre- and post-survey responses. Of the 20 participants of in the Women's Health presentation, 90% self-scored less than 9 out of 10 in health knowledge on the pre-survey. In the post-session survey, 25% self-scored less than 9 out of 10 in health knowledge. The average change showed a 37.9% increase in knowledge and health attitude. The mean score of baseline knowledge based on a range of 1-10 before the presentation was 7.1 and after the presentation was 9.3. Between the pre- and post-survey scores, the paired t-test was highly significant ($p < 0.0001$). See Table 1 for pre- versus post-survey results for Women's Health.

Of the 27 participants who went to the Children's Health presentation, 81% self-scored less than 9 out of 10 in health knowledge pre-survey. In the post-session survey, 22% self-scored less than 9 out of 10 in health knowledge. The average change showed a 61.3% increase in knowledge and health attitude. The mean score of baseline knowledge based on a range of 1-10 before the presentation was 7.6 and after the presentation was 9.7. Between the pre- and post-survey scores, the paired t-test was highly significant ($p < 0.0001$). See Table 1 for pre- versus post-survey results for Children's Health.

Table 1. Pre versus Post Health Attitudes Questions

	Pre-Survey on Women's Health (n=20)	Post-Survey on Women's Health (n=20)	Pre-Survey on Children's Health (n=27)	Post-Survey on Children's Health (n=27)
How knowledgeable are you on this topic, on a scale of 1-10?				
<i>1-3 self-score</i>	5%	5%	3%	0%
<i>4-6</i>	25%	5%	15%	0%
<i>7-9</i>	60%	15%	63%	22%
<i>10</i>	10%	75%	19%	78%
How interested are you in learning about this topic on a scale of 1-10?				
<i>1-3 self-score</i>	0%	0%	0%	0%
<i>4-6</i>	0%	0%	0%	0%
<i>7-9</i>	10%	10%	7%	7%
<i>10</i>	90%	90%	93%	93%
I know where I can learn more about this topic.				
<i>Yes</i>	60%	95%	59%	85%
<i>No</i>	30%	0%	22%	0%
<i>No response</i>	10%	5%	19%	15%
I am comfortable talking about this topic with my healthcare provider and can apply my knowledge on this topic in my everyday life.				
<i>Agree</i>	60%	65%	70%	81%
<i>Neutral</i>	25%	10%	4%	0%
<i>Disagree</i>	10%	20%	4%	4%
<i>No Response</i>	5%	20%	22%	15%
I am comfortable in talking about this topic with my friends, family, and/or loved ones.				
<i>Yes</i>	50%	90%	62%	85%
<i>No</i>	40%	5%	19%	0%
<i>No Response</i>	10%	5%	19%	15%

DISCUSSION

The purpose was to improve knowledge relating to family health and by promoting knowledge in the participants' native language of Spanish. We learned from this project that participants reported an improvement in health knowledge after live presentations in a community setting. Based on the data collected, the program was effective in improving participants' knowledge of the health topics that were presented. As a result, the affiliated health center expressed interest in expanding this program by offering more sessions in the community.

Additionally, by presenting the information in Spanish, participants were more engaged and able to learn preventative medicine. Participants reported feeling more empowered and more comfortable in talking about these health topics with their friends, family, and healthcare provider. This method of delivering health information in a non-clinical setting showed increased participants' willingness to seek healthcare information. Other organizations and communities may have different language barriers and thus may require alternative adjustments. Using this innovative approach to perform outreach and networking with various community organizations

will allow new audiences and community members to be reached for future projects. Findings indicated meaningful efforts to disseminate information can improve health knowledge, however, there is still a need for further longitudinal studies to evaluate if the improvement of health knowledge results in lifestyle modifications, increased healthcare visits, and improved health outcomes.

The primary limitation of this study was the time constraint, preventing us from collecting longitudinal data assessing the incorporation of the lifestyle modifications presented to them. A single intervention with a sample of convenience is not generalizable to the entire population. Additionally, due to the anonymous nature of the survey, there is no confirmation of how many participants from the first session attended the second session. There is a possibility of residual positivity from the first session, leading to higher scores in the second session.

CONCLUSION

In conclusion, this project highlighted how delivering health information in Spanish can empower Spanish-speaking individuals in the community to feel more confident in seeking healthcare. Also, it emphasized that health promotion can be done in non-traditional or non-healthcare settings such as dance classes and support groups. By collaborating with local community outreach departments in creating future health education programs, many community members can become advocates for their own health as well as for the health of their children and spouses.

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