

# Improving Shared Decision Making in Latino Men With Prostate Cancer: A Thematic Analysis

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## Abstract

**Background.** Multiple studies have shown that digitally mediated decision aids help prepare patients for medical decision making with their providers. However, few studies have investigated whether decision-support preferences differ between non-English-speaking and English-speaking Latino men with limited literacy. **Objective.** To identify and compare health information seeking patterns, preferences for information presentation, and interest in digital decision aids in a sample of Southern Californian underserved Latino men with newly diagnosed prostate cancer at a county hospital. **Methods.** We conducted semistructured, in-depth telephone interviews with 12 Spanish-speaking and 8 English-speaking Latino men using a purposive sampling technique. Following transcription of taped interviews, Spanish interviews were translated. Using a coding protocol developed by the team, two bilingual members jointly analyzed the transcripts for emerging themes. Coder agreement exceeded 80%. Differences were resolved through discussion. **Results.** Thematic differences between groups with different preferred languages emerged. Most respondents engaged in online health information seeking using cellphones, perceived a paternalistic patient-provider relationship, and expressed willingness to use hypothetical digital decision aids if recommended by their provider. English speakers reported higher digital technology proficiency for health-related searches. They also more frequently indicated family involvement in digital search related to their condition and preferred self-guided, web-based decision aids. In comparison, Spanish speakers reported lower digital technology proficiency and preferred family-involved, coach-guided, paper and visual decision aids. English speakers reported substantially higher levels of formal education. **Conclusion.** Preferences regarding the use of digital technology to inform prostate cancer treatment decision making among underserved Latino men varied depending on preferred primary language. Effective preparation of underserved Latino men for shared decision making requires consideration of alternative approaches depending on level of education attainment and preferred primary language.

## Keywords

decision aids, Latino men, prostate cancer, qualitative research, shared decision making

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Prostate cancer, the most common noncutaneous malignancy in men in the United States, has a prevalence of 3.3 million with more than 150,000 new cases diagnosed every year.<sup>1,2</sup> Multiple management options with similar efficacies vary greatly in risk and side-effect profiles. Therefore, the decision-making process is a task that challenges even the most well-informed and health-

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literate patients.<sup>3–5</sup> To address this challenge, the American Urological Association and the European Association of Urology recommend shared decision making for localized prostate cancer. Additionally, the Patient Protection and Affordable Care Act of 2010 emphasizes shared decision making for preference-sensitive treatment decisions.<sup>6–9</sup>

Shared decision making is a process by which patients and physicians identify the treatment modality that best aligns with patients' quality of life priorities, values, and health outcomes.<sup>10,11</sup> Shared decision making requires that patients are fully aware of treatment options, relative benefits, and side effects associated with each treatment. In addition, shared decision making involves accounting for individual patient preferences and values in order to inform decisions regarding care.<sup>12–14</sup> Despite the potential benefits for patients, several barriers limit the use of shared decision making in everyday clinical settings, including time constraints and a perceived lack of clinical applicability.<sup>15–17</sup>

Decision aids facilitate the shared decision-making process, explore realistic treatment expectations, and improve concordance between patient values and the chosen treatment.<sup>18,19</sup> Web-based decision aids effectively improve decisional quality when tested in cohorts of relatively well-resourced and educated Caucasian patients receiving care at tertiary academic centers.<sup>8,9</sup> However, these benefits may not translate to a different patient population. Latino patients, for example, seeking care at county facilities in the Los Angeles area, face disproportionate challenges engaging in shared decision making due to socioeconomic, cultural, and language barriers.<sup>20–22</sup> As a result, these patients experience alarmingly low prostate health literacy, greater cancer treatment-related uncertainty and decisional conflict, lower satisfaction with treatment decisions, and poorer quality of life.<sup>23,24</sup> Such discrepancies underscore a significant need for implementation of effective decision

aids that reduce shortcomings associated with prostate cancer care in these men. Currently, there are little data available on the potential effectiveness of decision aids in facilitating shared decision making in Latino men with prostate cancer.<sup>22–24</sup> Thus, this research seeks to enhance understanding of the decision-making process, unmet decision-making needs, and decision aid preferences regarding prostate cancer treatment in Latino men.

## Objective

We compared patterns of health information seeking and willingness to use decision aids in low-income Latino men with newly diagnosed prostate cancer and different language preference—Spanish or English. In particular, we explored prostate cancer information gathering, preference of information presentation (i.e., visual, web-based, or verbal), technology usage, and identify qualities of ideal decision-making treatment. We also probed strategies to move from current care to ideal care and delineate the potential role of web-based decision aids.

## Methods

### *Study Design and Patients*

We conducted semistructured, in-depth telephone interviews in two groups of Latino men (Spanish and English speakers) with newly diagnosed prostate cancer. Our bilingual study coordinator (JM) enrolled, consented, interviewed, and recorded all patients verbatim in their primary language preference. Two bilingual professionals with substantial experience in Spanish-English transcription transcribed audio-recordings into Spanish first and then translated into English. Research staff performed thematic analysis of all transcripts.

Purposive sampling technique was used to identify potential participants who met the following inclusion criteria: 1) self-identified Latino men with recent diagnosis of prostate cancer; 2) aged 50 or older; 3) able to communicate in English and/or Spanish; 4) in the process of deciding on a prostate cancer treatment; and 5) willing to participate in the study. The term Latino is used in this study to represent individuals from South America, Central America, and Mexico.

### *Recruitment*

We recruited participants from the Olive View—University of California Los Angeles Medical Center urology clinic. This medical center serves a large underinsured, low-income Latino population in Los Angeles, our target

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population. We used the hospital's electronic medical record to identify patients with a positive prostate biopsy who met inclusion criteria. Research staff (JM) conducted in-person recruitment during participants' urologic clinic visits in 2018–2019. All candidates received information about the study's potential risks and benefits and a paper copy of the study's description in English or Spanish. After enrollment, patients underwent a semistructured telephone interview at their preferred date and time within 2 weeks of the first encounter. Our final sample was 20; we stopped participant recruitment when no new themes emerged—thematic saturation.<sup>25</sup> In addition, researchers' anecdotal data collection experience from previous studies<sup>26</sup> were considered to estimate a budget, which was not exceeded. Recruitment of both Spanish-speaking ( $n = 12$ ) and English-speaking ( $n = 8$ ) men occurred concurrently in order to obtain a relatively balanced sample. All English speakers were bilingual in Spanish, but preferred to communicate in English during their health visits.

### *Data Collection*

The study coordinator (JM) conducted all 20 in-depth, semistructured telephone interviews. The interviews were audio-recorded, lasting an average of 47.5 minutes, and followed a semistructured interview guide (see Supplemental Appendix). We asked each participant a series of questions focused on technology use, medical information gathering, previous decision-making experiences in non-urology and urology clinic visits, preferred sources of information, and interest in theoretical decision aids. We asked open-ended follow-up questions for queries not answered by the participant or if further explanation was warranted. JM prompted discussion of the subjects' perceptions of care and decision making, as well as how each subject envisioned ideal care. Interview times varied based on each individual's narrative and the complexity of health problems described. Each participant received a \$100 honorarium gift card.

### *Data Analysis*

Analysis following interview transcription and translation of Spanish-language interviews into English consisted of three stages. In the first stage, two bilingual co-investigators (JM and JB) cross-checked audio recordings with transcripts to reassess accuracy and read through all transcripts to identify overarching themes across both groups. Next, the two bilingual investigators, working with a third researcher (DA), developed the

preliminary coding scheme from the first eight transcripts with periodic review and feedback from other members of the investigating team.<sup>27–29</sup> This coding scheme was used and modified accordingly to code the rest of the interviews in sets of three. In the second stage, JM and JB jointly coded the transcripts comparing, discussing, and agreeing on each code throughout the transcripts. Codes were periodically assessed and grouped to develop subtopics, subsequent topics, and themes. Emerging new codes refined and redefined established themes. Coder agreement exceeded 80%. Thematic saturation was reached with 18 transcripts on the basis of diminishing theme-driving codes creation with each subsequent set of transcripts; no additional theme-driving codes were identified on transcripts 19 and 20.<sup>25</sup> We developed subtopics, which were subsequently organized into broader topics.

In the third stage, we identified and assessed thematic similarities and differences between groups. We shared updates and results periodically with the other team members to ensure arising issues were discussed and resolved early on. This study was approved by the University of California Los Angeles Institutional Review Board, Identification Number 18-000817.

## **Results**

We interviewed 20 participants ages 52 to 74, formal education was 8.6 and 11.9 years for Spanish and English speakers, respectively, as shown on Table 1. Our thematic analysis found areas of similarities and divergences between Latino men with different language preferences. Four main themes resulted from this investigation: 1) English-speaking Latinos feel more comfortable utilizing digital technology for information search, 2) the importance of family involvement and their role in decision making, 3) the presence of paternalistic patient-physician relationship was common, and 4) Latino men are interested in decision aids with different delivery modalities. A summary of our topics, subtopics, and their relationship with the main themes is presented on Table 2.

### *English-Speaking Latinos Feel More Comfortable Utilizing Digital Technology for Information Search*

More English speakers than Spanish speakers reported that they were more comfortable using electronic devices such as computers and smartphones for their daily activities. Those who used digital devices felt the internet was very “helpful” since they could find “almost anything.”

**Table 1** Patient Characteristics

Characteristics	Spanish, <i>n</i> = 12	English, <i>n</i> = 8	Total, <i>n</i> = 20
Age (years)			
50–59	4	1	5
60–69	6	7	12
70–79	2	1	3
Language preference			
English	—	8	8
Spanish	12	—	12
Ethnicity			
Mexican	9	4	13
South American	1	3	4
Central American	2	1	3
Highest level of education			
1–6 elementary school	8	1	9
7–8 secondary school	1	1	2
9–12 high school	2	3	5
13–16 college	1	2	3
>16 graduate	—	1	1
Average years of education	8.6	11.9	8.6
Prostatic cancer staging <sup>a</sup>			
T1c	5	3	8
T2	7	4	11
T3a	—	1	1

<sup>a</sup>T1c: tumor identified by prostatic needle biopsy; T2: tumor confined to the prostate; T3a: tumor extending outside the prostate capsule.

I am not addicted to my phone. . . . I only check once or twice a day to see if I have messages. If there is a comment from my family or for curiosity to see what is new in the internet. (67-year-old Mexican Spanish speaker, #2, 7 years of education, and T2 disease)

I do not use any computer of any sort. I only use the phone and actually I do not know how to use it that well. . . . I do not know how to operate a smartphone. (57-year-old Mexican Spanish speaker, #3, 6 years of education, and T2 disease)

Well, I like to use YouTube quite often for information basically. . . . I have, of course, emails that I receive quite often. (68-year-old Colombian English speaker, #9, 17 years of education, and T2 disease)

I use [cellphone] to get into the web, to look for information within YouTube, that's how I do my research like for cancer for my prostate. (55-year-old Mexican English speaker, #19, 12 years of education, and T2 disease)

Latino men in both groups relied on online information searching for non-urological health problems after diagnosis.

I did a lot of research on the internet. Checked a lot of websites where . . . they give advice, especially for sciatica. (62-year-old Guatemalan Spanish speaker, #1, 16 years of education, and T1c disease)

I [have] been getting a lot of the natural remedies for cancer from the internet like vitamins. (60-year-old Bolivian English speaker, #8, 13 years of education, and T1c disease)

However, few Spanish speakers relied on online searches for prostate cancer–related information. Being satisfied with the verbal information received from their urologist was the most commonly mentioned reason preventing Spanish speakers from engaging in urology-specific information search. While both groups trusted the information provided by their oncologist, more English speakers felt the need to find out more about their cancer. English speakers unanimously relied on the internet for health information about prostate cancer treatment including nontraditional medical options.

No [I did not search for information] because he [urologist] had already sent me from here with the information that it was positive. I no longer doubted it. (63-year-old Mexican Spanish speaker, #17, 6 years of education, and T2 disease)

I pay attention to what the urologist says and that is enough information for me. He wants to help me and I listen. (61-year-old Mexican Spanish speaker, #4, 8 years of education, and T1c disease)

I looked up prostate cancer, medications, natural remedies to help me fight the cancer. . . . I looked for natural remedies, but there was not much about herbs, juices, and diets. (68-year-old Salvadoran English speaker, #14, 6 years of education, and T2 disease)

### *The Importance of Family Involvement and Their Role in Decision Making*

Family involvement during clinical visits was also different. Specifically, participants were asked to describe up to three non-urological clinic visits and their urological visit when they were told their prostate cancer diagnosis and whether their family had attended these visits and interacted with the physician. Seven out of 12 Spanish speakers' families were involved in the clinic visit, five families actively participated in the visit, while the other two had a passive role (e.g., did not ask questions, voice concerns, or converse with their physician). In comparison, six out of eight English speakers' families participated during the clinic visit and six had an active role.

[My wife] came to the office, but waited outside until I talked to the doctor. (52-year-old Mexican Spanish speaker, #7, 8 years of education, with T2 disease)

[Wife] sometimes ask questions that I do not make about my diet . . . the talk is very cordial between my wife and the

**Table 2** Topics and Subtopic in Relationship to Main Themes

Main Themes	Topic	Subtopic
English-speaking Latinos feel more comfortable utilizing digital technology for information search	Technology use	Technology proficiency
The importance of family involvement and their role in decision making	Information search	Non urological versus urological
	Illness management	Online inquiries about treatments/symptoms/side effects
	Family involvement	Clinic visits
	Information search	Treatments/clinical care
	Illness management	Decision making/treatment/support
	Decision making	Active/passive/degree of involvement
The presence of paternalistic patient-physician relationship was common	Clinical experience	Treatment options/treatment discussion
	Illness management	Paternalistic/shared decision/emergency decision
	Decision making	
Latino men are interested in decision aids with different delivery modalities	Clinical experience	Materials provided
	Illness management	Cancer-specific information/treatment options
	Decision making	Interest in using them/preference/web-based/printed with DVD/coach-assisted
	Decision aids	

doctor. (62-year-old Mexican Spanish speaker, #12, 12 years of education, and T1c disease)

The doctor says something like: you have higher blood sugar. Then [wife] would say that we are trying to keep my blood sugar under control, we keep a diet in the house. Then she asked the doctor about milk and stuff like that. (68-year-old Colombian English speaker, #9, 17 years of education, and T2 disease)

Family involvement extended beyond the clinic visit to medical information search. Patients perceived their family involvement in this regard as “important,” especially when they did not know where to look things up. Although family involvement was important, less than half of the Spanish speakers’ families helped with information search compared to almost all the families of English speakers.

I do have family, but they don’t say much. They do not give me much information. . . . My family knows about the problem, but they only say for me to take care. Nothing else. (70-year-old Mexican Spanish speaker, #5, 6 years of education, and T1c disease)

My wife did the research for me in books and [about] natural remedies. (55-year-old Mexican English speaker, #19, 12 years of education, and T2 disease)

When asked about the importance of family involvement in reviewing a theoretical decision aid, opinions differed. Regardless of the source of the decision aid, the majority of English speakers would opt to review the material alone, while the rest preferred to involve their families. In

contrast, most Spanish speakers favored reviewing the decision aid material with their families. Those who preferred to review the decision aid alone often considered the topic of prostate cancer “very personal” and something that they “dealt with” on their own. In general, families involved in reviewing the decision aids also had a significant role in the decision-making process.

I did not want people to know about it, only my wife. [regarding the decision-making process], I think I will do it alone. (57-year-old Mexican Spanish speaker, #3, 6 years of education, and T2 disease)

[I will review it] with my family and my wife . . . so we can be reading and exchange questions between the two or one of my children or the two. (62-year-old Mexican Spanish speaker, #12, 9 years of education, and T1c disease)

I don’t like to bring my family in any of that, unless it is really serious. Basically, it would be just me. (68-year-old Colombian English speaker, #9, 17 years of education, and T2 disease)

### *The Presence of Paternalistic Patient-Physician Relationship Was Common*

Latino men in both groups indicated that, in many occasions, their physicians told them what to do for their various medical conditions. For most participants, few treatment options were given during their clinic visits. In addition, some noted a lack of discussion about the cause of their disease or the reasoning for their treatment recommendation. While some men were fine with being told

what to do, others felt the need for further clarification. However, most men did not ask questions to clarify their doubts. Very few men described discussions with their providers consistent with shared decision-making, where options and their risks and benefits were explained.

I did not talk much, [the doctor] only told me to manage my food intake. . . . She only said to eat less. . . . She scolded me because I eat fried foods. . . . I could change clinics, but I am doing well with her. I have to respect the rules. (70-year-old Mexican Spanish speaker, #5, 6 years of education, and T1c disease)

When they gave me give the diagnostic that I had prostate cancer, there they gave me three options . . . the doctor told me I must get surgery and he booked for the surgery. (74-year-old Venezuelan Spanish speaker, #16, 4 years of education, and T2 disease)

He said we can fix your problem with surgery or chemotherapy. Then he told me he could do my surgery soon and told what to expect from surgery. (68-year-old Salvadoran Spanish speaker, #10, 4 years of education, with T2 disease)

He said, 'I am going to get you all the test you need and see if I can add you for surgery soon . . . the doctor was a little bit rough with the news. (66-year-old Mexican English speaker, #11, 11 years of education, and T1c disease)

So, after he [did] the examination, [he] said well, really so far I founded nothing wrong, but just because you have a high PSA I going [to] schedule for you to have a biopsy. (-60-year-old Bolivian English speaker, #8, 13 years of education, and T1c disease)

### *Latino Men Are Interested in Theoretical Decision Aids With Different Delivery Modalities*

A majority of participants in both groups stated that they did not receive materials with prostate cancer specific information. Only two out of 12 Spanish speakers received printed information from their urologist, compared to three out of eight English speakers.

The only material they give me is papers with the appointment. . . . But information about what I should do or not do, or how to treat, or what to eat or what not to eat, no. (57-year-old Mexican Spanish speaker, #13, 12 years of education, and T2 disease)

No, no materials like that or not even like where to look [for information] . . . no guidance from the doctors or the clinic. (66-year-old Mexican English speaker, #11, 11 years of education, and T1c disease)

Despite not receiving informative materials during their cancer-related visits, most men in both groups indicated willingness to use a web-based or printed material with DVD decision aids. Many men reported that they accessed decision aids in different media. Some considered involving family members or friends in order to access decision aids as long these were recommended by their physician.

It would be better to have it written or a DVD. . . . It is better for me. . . . I do not have an education. . . . I do not have internet. (70-year-old Mexican Spanish speaker, #5, 6 years of education, and T1c disease)

I imagine that the internet is less complicated. Easier to access from your phone. So, I can use it to see what the doctor sends me. (58-year-old Mexican Spanish speaker, #15, 6 years of education, and T1c disease)

I can [use a web-based decision aid] . . . if I don't have a computer I will go to the library and sit there and search it there. (73-year-old Peruvian English speaker, #6, 16 years of education, and T3a disease)

I mean a DVD might work too. A DVD I can put in my computer and watch it whenever. (68-year-old Salvadoran English speaker, #14, 6 years of education, and T2 disease)

The preferred delivery modality of prostate cancer-specific information differed between participants in the two language groups. Most Spanish speakers favored printed material with a DVD over web-based decision aid. In comparison, most English-speaking participants preferred a web-based method and over printed materials. The general perception was that delivery preferences varied based on "accessibility" and "comfort" with internet-based methods.

Yes . . . I could read it [printed materials] and the DVD I could see it there, but not the Internet. I am old for that. (63-year-old Mexican Spanish speaker, #17, 6 years of education, and T2 disease)

A website is much better for many reasons . . . now the phones have become so accessible that . . . even in your own work you can get on a website and check things that interest you. (62-year-old Guatemalan Spanish speaker, #1, 16 years of education, and T1c disease)

I'm a very visual guy. . . . I think a website with pictures or a video with simple language would work best for me. I don't mind reading things online. (65-year-old Mexican English speaker, #20, 12 years of education, and T1c disease)

In addition, both Spanish and English speakers considered the potential assistance of a coach "beneficial."

While most Spanish-speaking participants preferred coaching assistance at the urology clinic, a majority of English speakers favored a web-based decision aid at home without assistance. Many men view the assistance of a coach as another opportunity to better understand their disease and treatment options.

If they had [coaches] right in there at the hospital would be great . . . a lot of people are going to get a lot of information from them and maybe they're not going to leave the hospital . . . with a lot of doubts. That creates anxiety because of the uncertainties. (57-year-old Mexican Spanish speaker, #13, 12 years of education, and T2 disease)

I would feel more comfortable at home. . . . I only share information with my doctor and my son. . . . I think in the office with other people it will be a little uncomfortable for me. So, I would much rather have to do it at home. (69-year-old Mexican English speaker, #18, 8 years of education, and T2 disease)

## Discussion

Prior studies identified several barriers to engagement and strategies to promote shared decision making in Latino men.<sup>30,31</sup> However, this study is the first to evaluate underserved Latino men with prostate cancer and their interest, experiences, and preference in health information seeking and decision aids. This study also offers a unique analysis of the thematic differences among Latino men with different language preferences and their potential role to move from current care to ideal care.

Our study explored Latino men's views and preferences with regard to technology, health communication, physician-patient relationships, and the use of decision aids for prostate cancer treatment decisions. We found Latino men with varying primary language preferences differ regarding their comfort with and utilization of technology, interest in information gathering, willingness to engage with decision aids, and decision-making preference. Specifically, more of the English-speaking versus Spanish-speaking participants used the internet in their daily activities and appeared to have higher levels of technological experience. Furthermore, fewer Spanish speakers reported engaging in web-based health information searches for both urologic and non-urologic topics compared to English speakers. In fact, most Spanish speakers did not use their digital devices as search engines. These findings support prior research suggesting that underserved Spanish-speaking Latino men tend to be less familiar with the internet, lack initial interest in

technology search engines, and require longer time to complete web-based decision aid tasks.<sup>32,33</sup> Despite these barriers, it appears that Spanish speakers who tried web-based decision aids were more likely to use them again and recommend them to others.<sup>33</sup> Spanish speakers may not individually seek out web-based information, but are often willing to try it. Similarly, most Spanish speakers in our study were willing to try a hypothetical, web-based decision aid in Spanish if recommended by their urologist. Such findings reinforce the importance of a health care provider's endorsement for effective engagement of a bilingual decision aid. Furthermore, these results highlight that web-based decision aids may be beneficial for a subpopulation of Latino men, namely, English speakers.

Additionally, our study demonstrated the importance of family involvement. English-speaking participants reported higher levels of active family involvement during non-urologic visits. These findings contribute to previous reports underscoring the importance of accepting support from family members, and in many cases involving them in the decision making.<sup>34,35</sup> Additionally, a majority of English-speaking patients favored reviewing a theoretical decision aid alone, while almost all Spanish-speaking patients preferred to share and review it with their families. Such findings may be associated with the effects of acculturation—the process of cultural adaptation experienced by some individuals (but not all) as they acquire the host culture's language.<sup>35–37</sup> Prior research has found that Spanish-speaking Latinas (less acculturated) were more likely to involve their family in decision making about whether to undergo mastectomy for breast cancer compared to English-speaking Latinas (more acculturated).<sup>37</sup> We also found that English speakers more frequently involved their families in health information search—a finding not reported in other studies that reflects the complexity of family involvement in the health of Latinos. This may be due to higher levels of experience where language is less of a barrier to navigating healthcare issues, asking questions, finding alternative answers, and ultimately making decisions. Host culture language acquisition may not directly lead to independence in decision making in all patients. However, such understanding may enable patients to become more involved in their care and assert more independence in decision making if desired. While patients in both groups stated that family provided support and cared for them, such support varied by language preferences and warrants consideration in the design and implementation of decision aids.

The presence of paternalistic relationships between Latino men and their physicians was thematically

common. Participants in both groups emphasized that they often relied on physician expertise and followed provider recommendations during their non-urologic visits. Some portrayed the image of a physician as someone who sets “rules,” deserves “respect,” and should be “trusted.” This pattern was also evident in urologic visits. Although most patients received prostate cancer information, they often did not discuss their personal treatment-related preferences with their physician, a finding consistent with prior studies in various groups of Latino patients.<sup>20,38,39</sup> However, more recent studies have demonstrated that demographic factors such as acculturation, language, education attainment, and provider’s cultural competency influence preference for a less active decision-making method in Latinos.<sup>40,41</sup> In fact, Spanish speakers in our cohort had lower education levels and experienced few shared decision making during their non-urological clinic visits than did English speakers. Awareness of this population’s tendency to see physicians as trusted information sources may signal the need for providers to promote shared decision making more actively or with decision aids for these patients. These patients’ apparent initial disinterest in shared decision making may simply reflect the trust bestowed on their physician’s recommendations. However, physicians may use our findings to understand their role in this population in order to bridge cultural gaps and promote a more ideal decision-making strategy.

Beyond their patient-provider relationship, lack of cancer-specific information may further hinder patients’ involvement in their health decisions. We found that only five out of 20 patients received paper-based prostate cancer information and no patient was encouraged or received instructions on how to access information elsewhere. Additionally, most patients would have liked more information about their disease, prognosis, and treatment options. Consistent with our findings, other researchers have identified significant racial and ethnic discrepancies in information sharing in Latino compared to non-Latino white patients.<sup>42,43</sup> Specifically, Lin and colleagues found that physicians caring for Latinos are less likely to share information about their medical experiences with other patients and less frequently quote research to support their treatment recommendation, which may negatively affect communication and relationships with minority patients.<sup>42</sup> In our interviews, we found that urologists frequently communicated relevant cancer-specific information verbally. However, such information may be overwhelming for Latino men, especially considering the feelings of “shock,” “uncertainty,” and “fear” associated with receiving a prostate cancer

diagnosis in otherwise asymptomatic men.<sup>20,44</sup> Receiving a cancer diagnosis coupled with language and literacy barriers may heighten these feelings, which can further strain patient-provider communication. Development of bilingual web-based or paper-based decision aids with printable information components may ameliorate this problem. They may serve as both visual aids for patients and road maps for providers to explain diagnosis, treatment, and follow-up. Such tools also provide information that may lessen patient anxiety during the clinical visit, or at the very least, help mitigate any fatalistic thoughts the patient may have when anxiety is high. Likewise, they become useful when patients return home, have had time to process the diagnosis, and are better able to interpret the information.

Furthermore, our study assesses the theoretical interest and modality preferences for decision aids in Latino men. In fact, a systematic review found that although attention to consumer health information technology for US Spanish-speaking Latinos has increased, there is a need to study Latino subpopulations as well as men’s health issues since most studies involved women.<sup>45</sup> We address this need by establishing a narrative background for decision aids and analyzing observed differences based on language preference. In our study, Latino men showed interest in using decision aid tools to further their prostate cancer education regarding diagnosis, prognosis, and treatment. Although willingness to try hypothetical tools was relatively high for both groups, the preferred mode of presentation (e.g., printed, DVD, web-based) varied between groups. While Spanish speakers preferred printed decision aids with a DVD, English speakers preferred web-based tools. A plausible explanation for our results relates to difficulty with technology use and discomfort performing computational tasks, which may be seen as foreign to patient’s day-to-day activities leading avoidance when given options to obtain the same information in paper form or as a visual aid. These differences underscore the need for multimedia decision aids in order to increase interest among underserved Latino men in taking a more active role in their health care and decision making.

Additionally, we found that most English speakers preferred independent review of decision aids at home, compared to Spanish speakers who preferred coach-guided aids at the clinic. Independence among most English speakers may be associated with their proficiency in technology usage and, in one case, experience using a health network to communicate with his care providers. Interest in coach-guided decision aids in Spanish speakers may relate to their views about difficulties with health




care navigation, language barriers, low literacy, and limited use of technology. However, positive attitudes toward assisted decision aids in Latino men provide important information for combined decision aid interventions. Prior studies have shown the effectiveness of combined decision aids at improving disease knowledge, risk information, and increase rate of colorectal cancer screening compared to usual treatment for vulnerable populations.<sup>46,47</sup> Hence, future studies may focus on exploring alternative decision aids depending on preferred primary language and associated factors such as education attainment.


Our study must be considered in the context of its limitations. The participant sample is representative of the linguistic preferences of the Latino population seen at Olive View–UCLA Medical Center, and we recognize that comment saturation was met in our sample. However, a larger, more diverse participant sample may have yielded further thematic insights. Furthermore, our small sample size may have enhanced the comparative difference between Latinos with different language preferences; future research is warranted to confirm our findings. We used one urological disease (prostate cancer), which allowed for consistency in our interviews and findings, but may limit the generalizability of findings to other urological diseases. We recognized that the Latino community in the United States is heterogeneous and varies regionally. Therefore, our metropolitan, Southern California–based sample may not fully represent the experiences of Latinos elsewhere, or even Latinos receiving care at non-county facilities. Nonetheless, this study may serve as cornerstone for future research in other Latino men.

## Conclusion

Preferences regarding the use of digital technology to inform prostate cancer treatment decision making among underserved Latino men varied depending on preferred primary language. Effective preparation of underserved Latino men with prostate cancer for shared decision making requires consideration of alternative approaches depending on level of education attainment and preferred primary language.

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## Supplemental Material

Supplementary material for this article is available on the *Medical Decision Making Policy & Practice* website at <https://journals.sagepub.com/home/mpp>.

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