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Translating self-persuasion into an adolescent HPV vaccine promotion intervention for parents attending safety-net clinics

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Abstract

Objective—Self-persuasion is an effective behavior change strategy, but has not been translated for low-income, less educated, uninsured populations attending safety-net clinics or to promote human papillomavirus (HPV) vaccination. We developed a tablet-based application (in English and Spanish) to elicit parental self-persuasion for adolescent HPV vaccination and evaluated its feasibility in a safety-net population.

Methods—Parents (N=45) of age-eligible adolescents used the self-persuasion application. Then, during cognitive interviews, staff gathered quantitative and qualitative feedback on the self-persuasion tasks including parental decision stage.

Results—The self-persuasion tasks were rated as easy to complete and helpful. We identified six question prompts rated as uniformly helpful, not difficult to answer, and generated non-redundant responses from participants. Among the 33 parents with unvaccinated adolescents, 27 (81.8%) reported deciding to get their adolescent vaccinated after completing the self-persuasion tasks.

Conclusions—The self-persuasion application was feasible and resulted in a change in parents' decision stage. Future studies can now test the efficacy of the tablet-based application on HPV vaccination.

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Practice Implications—The self-persuasion application facilitates verbalization of reasons for HPV vaccination in low literacy, safety-net settings. This self-administered application has the potential to be more easily incorporated into clinical practice than other patient education approaches.

1. Introduction

Self-persuasion, the process of generating one's own arguments for performing a behavior, is an effective behavior change strategy [1–5]. Approaches to self-persuasion have improved health behaviors including smoking cessation, dietary behaviors, and safer sex practices [1–4,6,7]. However, such approaches have not been developed for use in U.S. safety-net clinics whose mission is to care for medically underserved populations (uninsured, low-income, less educated) [8–10]. Nor has self-persuasion been developed to promote the human papillomavirus (HPV) vaccine. This study's purpose was to demonstrate feasibility and examine effects of a parent-targeted, self-persuasion intervention promoting adolescent HPV vaccination in a safety-net clinic setting.

U.S. adolescent HPV vaccination is suboptimal [11] and is a behavior for which self-persuasion may be particularly effective. One reason for suboptimal rates is that many parents—primary decision-makers for adolescent immunization—remain undecided or ambivalent about the vaccine, even with a provider recommendation [12–16]. Undecided parents are a heterogeneous group: some perceive low risk or poor vaccine efficacy; others are concerned about promoting sex, unknown side effects, or are simply unmotivated [12,17]. By leveraging parents' own arguments for HPV vaccination, a self-persuasion intervention may efficiently deliver personally relevant arguments for the vaccine [7] and effectively address parental indecision.

Self-persuasion interventions have typically been used among well-educated populations [1–4,6] by either writing [3,4,6] or verbalizing arguments [3], but have not been implemented among diverse underserved populations seen in safety-net clinics. Before a self-persuasion HPV vaccine intervention can be tested in safety-net clinics, two feasibility issues needed to be addressed. First, whether safety-net populations with lower education and literacy levels [18–20] can perform the self-persuasion tasks (generate and verbally articulate their own reasons for HPV vaccination). Second, whether the self-persuasion tasks can be performed by parents with different demographic characteristics (preferred language, sex of the adolescent). Before this study, no self-persuasion procedures had been developed in Spanish. Also, it was unclear whether parents of boys (compared to girls) might struggle in generating reasons for HPV vaccination because parental awareness of the causal link between HPV infection and cervical cancer is higher than for anal, penile, and oropharyngeal cancers (i.e., cancers affecting males) [21].

We developed and tested a tablet-based (iPad) application instructing parents to verbally complete two self-persuasion tasks: 1) answer questions about the vaccine to brainstorm different reasons for vaccination; and 2) summarize, in their own words, reasons for the vaccine that are important to them. We hypothesized that completing tasks via a tablet-based application would be a feasible strategy for use in safety-net clinics because the voiceover

narration in the application circumvents potential literacy concerns and the tablet's audio-recording function facilitate self-administration of the tasks. To assess feasibility among parents of adolescents attending safety-net clinics, we conducted cognitive interviews gathering quantitative and qualitative data and addressed the following research questions (RQ):

(RQ1) Did participants like the application and would they be interested in using it in clinic?

(RQ2) Which question prompts helped parents generate reasons for the HPV vaccine while not raising vaccine concerns?

(RQ3) Were participants' able to verbalize reasons for HPV vaccination?

(RQ4) Did performing the self-persuasion tasks shift parents' decisions about the vaccine?

We also explored the extent to which participants' performance of tasks and evaluations of the application varied across language (Spanish, English) and sex of the adolescent.

2. Methods

2.1 Participants

Eligible participants included parents of patients (ages 11–17) attending safety-net pediatric clinics in Dallas, Texas. Exclusion criteria included no telephone access, impaired hearing or speech, or adolescent who was pregnant. We sampled parents of unvaccinated and vaccinated children (3:1 ratio) to gather a full range of evaluations on the self-persuasion tasks. Potential participants were identified via electronic medical records (EMR), mailed an invitation letter, and called to confirm eligibility, obtain verbal consent, administer the baseline survey, and schedule an in-person cognitive interview. Details about recruitment procedures and the survey are published elsewhere [22]. We spoke to and consented 189 parents; 27 did not contribute any data, 117 parents only completed the survey, and 45 parents completed the survey and cognitive interview (12 of whom had a vaccinated adolescent). There were no differences between the 72 survey-only parents and the 45 in the final sample with respect to parents' race/ethnicity, education, preferred language, or adolescent's sex or vaccination status (all p s > .33).

2.2 Cognitive Interview Procedures

Parents met with one of six bilingual research assistants (RA) trained in cognitive interview procedures at their pediatric clinic or the research facility. After providing verbal consent, participants used the tablet to complete the self-persuasion tasks in their preferred language and then the RA administered a 45–60 minute cognitive interview.

2.2.1 Tablet-based Application—To ensure each participant had enough knowledge about HPV and the vaccine to generate arguments, the application began with a brief educational video (5 minutes and 20 seconds) that provided information about HPV (e.g., prevalence, consequences) and the vaccine (e.g., efficacy, safety). In the first self-persuasion task, participants responded to 11 question prompts to help them brainstorm and verbalize

different reasons for vaccinating their adolescent. The specific prompts covered an array of HPV-related topics (e.g., protecting health, preventing cancer, anticipated regret for not vaccinating; see Table 2). In the second task, the application instructed participants to verbally summarize up to three reasons for getting their adolescent vaccinated. The application recorded participants' responses and how long (in seconds) they spent on each task.

2.2.2 Cognitive Interviews—In the cognitive interview, the RA collected quantitative and qualitative data to evaluate the self-persuasion tasks [23]. To assess reaction to the tablet (RQ1), the RA asked two open-ended questions: *How did you like using the iPad?* and *How would you feel using the iPad in a clinic waiting area?*

To determine which of the 11 question prompts helped parents brainstorm reasons for the vaccine (RQ2), the RA asked participants to use a scale from 1 to 5 to rate the difficulty in answering each prompt (*How hard was it to come up with your answer?*) and helpfulness of each (*How much will thinking about this question help you make a decision about vaccination?*). Participants were also asked if any prompts raised concerns about the vaccine and, if so, the RA probed further to understand the nature of the concerns.

To evaluate whether participants were able to verbally summarize reasons for HPV vaccination (RQ3), participants used a scale from 1 to 5 to rate this task for difficulty (*How hard was it to say three reasons in your own words?*) and helpfulness (*How much will saying three reasons in your own words help you make a decision about the HPV vaccine?*). If difficult, the RA probed to understand why.

To determine whether completing the self-persuasion tasks shifted parents' decisions about the vaccine (RQ4), we asked a single-item decisional stage question at three points – during the recruitment call, after the educational video, and after completing the self-persuasion tasks. We asked participants, *Which statement best describes your thoughts about getting the HPV vaccine for your [daughter/son]?* [24] Response options were: *I have never thought about getting the HPV vaccine for [her/him]; I am undecided about getting the HPV vaccine for [her/him]; I do not want to get the HPV vaccine for [her/him]; I do want to get the HPV vaccine for [her/him]*. We assessed if decision stage shifted after exposure to the educational video and after the self-persuasion tasks.

The UT Southwestern Institutional Review Board approved all study procedures (STU022013-016).

2.3 Mixed-Methods Analysis

2.3.1 Quantitative analysis—We used descriptive statistics to examine whether the prompts differed from each other on response time, difficulty and helpfulness ratings. These three metrics also evaluated the reasons summary task. We used t-tests to determine whether participants' performance and evaluation of the tasks varied across language (Spanish, English) or sex of the adolescent. Finally, we used a chi-square test to determine changes in decisional stage.

2.3.2 Qualitative analysis—We transcribed and translated parents’ audio-recorded responses to the tasks and the open-ended interview questions. Five research staff members were trained by the medical anthropologist investigator (SCL) on the deductive analytic approach appropriate for cognitive interviews [25,26]. Staff reviewed the transcripts in pairs, coding segments of text for the following themes predetermined by investigators: iPad usage, question prompt clarity, question prompt helpfulness, participant experience, volunteered concerns, and rationales for selected responses. Coders compared participants’ responses for each question prompt across parent language and sex of adolescent to explore whether comprehension and ability to respond varied. Responses were coded for outliers, extended or elaborated answers, and overlap with other question prompts. To determine the range and number of different reasons provided during the second task, coders mapped the reasons to themes and tallied distinct reasons. Throughout the analytic process, findings were discussed with principal investigators to inform modifications to the application and the cognitive interview guide.

3. Results

3.1 Sample Characteristics

Most participants were Hispanic (68.9%) and had a high school education or less (64.4%), indicated Spanish as their primary language (53.3%), and completed the self-persuasion tasks about a male adolescent (57.7%; Table 1). Nearly all participants (97.7%) were mothers or female guardians.

3.2 Reactions to Using the Tablet (RQ1)

Participants liked using the tablet and would be interested in using it at a clinic visit. Although some indicated concern about verbalizing responses in the waiting room and preferred a more private area.

3.3 Evaluation of the Question Prompt Task (RQ2)

3.3.1 Quantitative findings—Response time and mean difficulty ratings for each question appear in Table 2. Response times ranged from 25.5 to 42.3 seconds. Thus, minimal time was spent, and no question took substantially more time than any other. Response times from one participant were excluded because they were greater than three standard deviations above the mean for most questions. All question prompts were consistently rated low in difficulty (range = 1.00– 1.91).

Question prompts were rated high in helpfulness, ranging from 4.33 to 4.98 (Table 2). However, the prompt *In what ways might getting the HPV vaccine for your {daughter/son} be important to your family and friends?* had the lowest rating. This low rating, combined with parents’ feedback that they did not think the opinions of family and friends were important for this decision, indicates this question is likely not helpful to use in future interventions.

3.3.2. Qualitative findings—Nine of the 11 prompts elicited elaborated responses whereas only brief, factual answers were given for two: *How easy it would be to get the*

vaccine at a Parkland clinic? (e.g., “very easy”, “nothing more than going over [to clinic]”) and *What things put your {daughter/son} at risk for becoming infected with HPV?* (e.g., “sex”, “sexual activity”). Therefore, these two question prompts are likely not optimal for future self-persuasion interventions.

Two pairs of questions elicited redundant responses. The first pair was *In what ways can the HPV vaccine protect your {daughter’s/son’s} health?* and *How does the HPV vaccine help prevent cancer for your {daughter/son}?* Although many responses to both questions referenced cancer prevention, the former question elicited more varied responses than the latter including prevention of genital warts and protection of health generally. Thus, the *prevent cancer* prompt is likely to be less helpful in future research. The other pair was *Why might the HPV vaccine be important for teens who are not yet sexually active?* and *Why might the HPV vaccine be important for teens who are already sexually active?* Although developed to potentially elicit different responses from parents depending on their own adolescent’s sexual activity, parents’ responses did not reflect this difference. Because the former question aligns closely with vaccine recommendations, it is likely the better question of the two to use in future research.

Interviews suggested that the question prompts generally did not elicit concerns about the vaccine. Some participants said answering some questions raised concerns about the virus or about their child’s health and safety, but not about the vaccine *per se*. When asked to share any vaccine concerns that came to mind as they were using the application, only five parents expressed concerns. These were primarily about potential side effects. For example, “Well, like side effects, but they said there are no side effects. I’m an avid reader so as far as side effects...so when you hear other people saying things like that [about side effects], that can put negative thoughts in your head as well”. Other concerns were about being confronted with the idea of their adolescent being sexually active, as one parent expressed: “I don’t think many parents want to really think of their kids being sexually active at such a young age. So you might even scare them... you might create more conflict versus helping them decide”.

Overall, there were no patterns indicating that evaluations for any prompts differed by preferred language or sex of the adolescent. Of the 11 question prompts evaluated, we identified five that are likely to be less helpful in future research and interventions because they produced: a) brief responses (Table 2, #6 and #11), b) responses redundant with another prompt (Table 2, #2 and #9), or c) it had a lower helpfulness rating (Table 2, #4).

3.4 Evaluation of the Reasons Summary Task (RQ3)

3.4.1 Quantitative findings—Response times from one participant were excluded due to tablet mis-function. The mean time spent verbalizing reasons was 132.9 seconds and the mean difficulty rating was 2.32 (Table 2). Thus, verbalizing reasons for HPV vaccination was rated as moderately low in difficulty but more difficult than answering any of the question prompts. Although not statistically significant, the difficulty rating trended toward being more difficult for a male than a female adolescent ($M = 2.61$ versus $M = 1.97$; $t(40) = 1.57$, $p = .06$, $d = .50$) and more difficult for English- than Spanish-speaking parents ($M =$

2.57 versus $M = 2.07$; $t(40) = 1.23$, $p = .11$, $d = .38$). Mean helpfulness rating was 4.58 (Table 2) and there were no differences by preferred language or sex of the adolescent.

3.4.2 Qualitative findings—Two coders assessing how many distinct reasons each parent verbalized agreed on 98% of the codes; the lone disagreement was resolved through discussion. Most participants (38 of 45; 84.4%) verbalized three reasons for HPV vaccination. Among the 7 participants who did not verbalize three reasons, 4 verbalized two reasons, 2 verbalized one reason, and 1 participant did not verbalize any reason. Parents verbalized reasons mapped to the following themes: health protection and prevention, cancer, HPV infection, genital warts, sexual activity, protecting others, future regret, personal benefits, and concerns about side effects. These themes reflect topics covered by the question prompts (see Table 2 for examples of verbalized reasons).

Interviews suggested those who had difficulty verbalizing their own reasons indicated they could not decide which reasons to report, could not think of how to express the reasons in the moment, or simply could not generate three different reasons, as one parent expressed: "...it kinda makes you think like right now in the moment- you might have like one good reason, but three is kinda like... Two good reasons is good enough".

Overall, the findings indicate that the reasons verbalization task was helpful and easy to complete for most participants.

3.5 HPV Vaccination Decisional Stage (RQ4)

In the baseline survey, 33 participants indicated they either had never thought about or were undecided about getting the HPV vaccine for their adolescent. After watching the educational video, 18 of the 33 participants shifted their decisional stage and reported wanting to get the HPV vaccine for their adolescent. After completing the self-persuasion tasks, 9 of the remaining 15 participants (60%) indicated they had decided to get their adolescent vaccinated. Overall, 27 out of 33 (81.8%) decided in favor of the HPV vaccine after using the tablet application, while five (15.1%) remained undecided, and one participant (3.0%) had decided against the vaccine. Comparing the number of parents who decided to get their adolescent vaccinated ($n = 27$) to those who remained undecided or decided against ($n = 6$) resulted in a significant and large effect, $\chi^2(1) = 13.36$, $p < .001$, $\phi = .64$.

4. Discussion and Conclusion

4.1 Discussion

In this formative study, we demonstrated that Spanish- and English-speaking parents of boys and girls seen in safety-net clinics were able to use a tablet-based application to answer different questions about the HPV vaccine and verbalize their own reasons for having their child vaccinated, tasks critical to a self-persuasion intervention. Overall, these novel findings demonstrated feasibility in a low-income, less educated population, as the two self-persuasion tasks were seen as helpful and relatively easy to complete. Many past self-persuasion studies directed participants to write arguments and were conducted with well-educated samples [2,4,6,7]. These findings support using the self-persuasion technique in

diverse populations. Our findings are also important given the need to ensure that mobile health applications are usable in diverse, low-income populations [27].

We identified six question prompts (Table 2, #1, 3, 5, 7, 8, and 10) that were seen as uniformly helpful, not difficult to answer, and generated non-redundant responses. Thus, these specific prompts are likely to be useful in future self-persuasion interventions with this important and understudied population. Although we demonstrated that verbalizing reasons for vaccination is helpful and feasible, the optimal number of reasons to verbalize and how generating one's own reasons affects HPV vaccine uptake (initiation and completion) are questions to address in future research. Also, future studies should address why parents of male adolescents rated the task as more difficult compared to parents of female adolescents and English speakers rated it as more difficult than Spanish speakers.

The educational video and self-persuasion tasks helped parents of unvaccinated adolescents decide in favor of the vaccine (RQ4). More than half shifted decisional stage after watching the educational video. Of those who remained undecided after the video, an additional 60% shifted decisional stage after completing the self-persuasion tasks. This effect on parents' decision stage was statistically significant and large, as a phi (ϕ) coefficient above .50 is considered a large effect [28]. To further establish the effect on HPV vaccine decisions, future studies will need to compare the effect of the self-persuasion application against a control group and test the separate effects of the educational video and the self-persuasion tasks on vaccine initiation and series completion.

Parents' self-generated reasons for vaccination tracked closely with the content of the question prompts and with known determinants of HPV vaccination (e.g., benefits of the vaccine, concerns about side effects, anticipated regret at not vaccinating [16,29–31]. Prompting parents to consider these topics may be an effective way to influence HPV vaccination beliefs. For example, anticipated regret is related to health behaviors [32,33], including HPV vaccination [14,29], but how to intervene and change anticipated regret is less clear. By prompting parents with a question to consider future regrets about not vaccinating, some parents generated future regret as a reason to get their adolescent the vaccine. This approach to changing beliefs and behavior is similar to the mere measurement effect where simply asking respondents questions about the target belief can produce changes in behavior [33].

Two study limitations should be mentioned. First, the in-person sessions were conducted in a dedicated research office, although for some participants that office was located at their clinic. Future research should consider the extent to which our tablet-based intervention can be used in more public areas (e.g., clinic waiting room). Second, our sample only had one father and did not have any Caucasian participants (only 3.5% of the pediatric population in this healthcare system is Caucasian). Although we have no reason to suspect the self-persuasion tasks we developed here would not generalize to fathers or male guardians or to Caucasian populations, it is possible that the specific question prompts and reason topics we identified may not generalize. This is an issue to be addressed in future research.

4.2 Conclusion

We found that our tablet-based application, a new delivery method to elicit self-persuasion, was feasible in facilitating verbalization of personally relevant reasons for HPV vaccination among parents of adolescents attending safety-net clinics. This was the case for both Spanish- and English-speaking participants and for parents of boys and girls. Our rigorous formative research informs and supports future research to evaluate whether this self-persuasion approach affects parental decisions and adolescent HPV vaccine initiation and series completion in safety-net populations that experience significant disparities in HPV-related cancers.

4.3 Practice Implications

Though further work is needed to establish the effect of this approach on actual HPV vaccine behavior, the self-persuasion approach delivered via a tablet-based application facilitates safety-net parents' verbalization of reasons for HPV vaccination. The self-persuasion application is a promising tool to influence parental motivation for adolescent HPV vaccination in safety-net settings. Because the application is narrated and has audio-recording features to verbally capture reasons for vaccination, it circumvents low literacy (both reading and writing) as a barrier to health education and promotion. In addition, this self-administered application requires few staff resources, and thus, can be more easily incorporated into clinical practice than other patient education approaches requiring significant staff time and training.

I confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story.

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Highlights

- Self-persuasion is a feasible approach to promote the HPV vaccine.
- The tablet-based application influenced parents' decision-making about the vaccine.
- The application can minimize low literacy as a barrier to health promotion.

Table 1

Sample Characteristics of Parent Participants and their Adolescent (N = 45)

	N	%
Parent Ethnicity/Race		
Hispanic	31	68.9
Non-Hispanic, Black	14	31.1
Non-Hispanic, White	-	-
Parent Education		
Less than High School	11	24.4
Some High School	6	13.3
High School Diploma	12	26.7
Technical/Vocational	5	11.1
Some College	7	15.6
College Graduate	4	8.9
Parent Language		
Spanish	24	53.3
English	21	46.7
Adolescent Ethnicity/Race		
Hispanic	31	68.9
Non-Hispanic, Black	13	28.9
Non-Hispanic, White	1	2.2
Adolescent Gender		
Male	26	57.8
Female	19	42.2
Adolescent Age		
11–12	18	40.0
13–14	13	28.9
15–17	14	31.1
Adolescent Insurance		
Uninsured	8	17.8
Medicaid/CHIP*	24	53.3
Private/Commercial Insurance	1	2.2
Other Government	5	11.1
Missing	7	15.6
HPV Vaccination Status		
Vaccinated	12	26.7
Not Vaccinated	33	73.3

* Medicaid and CHIP are U.S. government programs to provide healthcare coverage for otherwise uninsured populations.

Table 2

Descriptive Information on Question Prompts and Reasons Verbalization Task

Question Prompts	Time Spent		Helpfulness		Difficulty		Example of Parent Responses
	M (SD)		M (SD)		M (SD)		
1. In what ways can the HPV vaccine protect your {daughter's/son's} health? ^a	25.5 (22.1)		4.84 (0.64)		1.91 (1.22)		"La puede proteger de no contraer cáncer en un futuro." Translation: It can protect her from not contracting cancer in the future.
2. How does the HPV vaccine help prevent cancer for your {daughter/son}?	35.2 (15.1)		4.59 (0.94)		1.50 (0.80)		"If you have the vaccine it is less likely to contract HPV."
3. What would happen if your {daughter/son} got infected with HPV? ^a	29.8 (15.5)		4.93 (0.33)		1.37 (0.99)		"Podría agarrar infecciones en sus partes genitales y desarrollar cáncer también en un futuro." Translation: Could get infections in (his/her) genitals and also develop cancer in the future.
4. In what ways might getting the HPV vaccine for your {daughter/son} be important to your family and friends?	30.3 (12.4)		4.33 (1.11)		1.18 (0.66)		"Perhaps the only opinion that we would have here to be important would be only for my husband and me."
5. In what ways might getting the HPV vaccine for your {daughter/son} be important to her/his future partner or spouse? ^a	34.3 (25.0)		4.66 (0.85)		1.51 (1.19)		"So that she doesn't get infected. Also, her significant other/partner, if in case in the future she got it, well he too would become infected if she doesn't have the vaccine. So, it is very important that she have the vaccine to not infect her significant other/partner."
6. What things put your {daughter/son} at risk for becoming infected with HPV?	34.6 (23.5)		4.60 (0.85)		1.47 (0.77)		"Que este activa sexualmente." Translation: That she is sexually active.
7. Some parents mention concerns about the HPV vaccine. What are things doctors or other parents can say to lower parents' concerns? ^a	33.5 (26.9)		4.42 (1.03)		1.55 (1.15)		"That it does not have serious side effects, they are minimal."
8. Why might the HPV vaccine be important for teens who are not yet sexually active? ^a	37.6 (31.9)		4.81 (0.71)		1.20 (0.79)		"Because it would prevent him from becoming infected."
9. Why might the HPV vaccine be important for teens who are already sexually active?	36.3 (24.8)		4.64 (0.96)		1.38 (0.91)		"Es muy importante porque si ya están sexualmente activos es más fácil de contraer esta infección. Entonces por eso es muy importante que se aplique la vacuna." Translation: It is very important because if they are already sexually active it is easier to contract this infection. Then that's why it is very important that the vaccine is applied (administered).
10. If you decide NOT to get the HPV vaccine for your {daughter/son}, why would you regret or feel sorry about that decision in the future? ^a	39.5 (54.2)		4.98 (0.15)		1.08 (0.26)		"In the future, him getting cancer, because I didn't do what I was supposed to do as a parent in getting him the vaccine."
11. How easy would it be for you to get your {daughter/son} the HPV vaccine at a Parkland clinic?	42.3 (20.9)		4.91 (0.43)		1.00 (0.00)		"Very, very, easy. Nothing more than going over there."
Reasons Verbalization Task	132.9 (55.0)		4.58 (0.99)		2.32 (1.32)		"My first reason is so he won't become sick with cancer in the future. My second reason is so he won't get sick and give it to anyone else in the near future. My third reason is you'd rather be safe than sorry. Porque al adquirir la vacuna evitaría que contrajera el VPH. Porque estaría más tranquila yo de saber que esta prevenida contra el VPH. Pues teniendo su vacuna también... evitaría... contagiar de alguna enfermedad a otras personas."

Question Prompts	Time Spent <i>M (SD)</i>	Helpfulness <i>M (SD)</i>	Difficulty <i>M (SD)</i>	Example of Parent Responses
				Translation: Because on acquiring the vaccine it would prevent from contracting HPV. Because I would be calmer knowing that she is prevented against HPV. Well also having your vaccine... would avoid...to infect of some disease to other people.

Note.

^a Question prompts identified to be the most useful for future self-persuasion studies.

Helpfulness: 1 (*not at all helpful*) to 5 (*very helpful*); Difficulty: 1 (*not hard at all*) to 5 (*very hard*). Question prompt response times from one participant were excluded because multiple times were > 3 standard deviations above the mean value. Reasons summary task response times from one participant were excluded due to functionality issues with the tablet that resulted in times being recorded incorrectly.