**SUPPLEMENTAL DIGITAL CONTENT**

***Religiosity and Parental Acceptance***

***of Human Papillomavirus (HPV) Vaccine in 9-18 Year-Old Girls***

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**ABSTRACT:** The religious affiliation of parents/guardians may factor into the decision to accept Human Papillomavirus vaccine (HPV) vaccination for their 9-18 year-old girls but prior research findings are inconsistent on religious impact. This study assessed degree of religiosity and impact on HPV vaccination. No correlation was found between religiosity and vaccination status however significant correlations were found between religiosity and other assessed variables.

**KEY WORDS**: cancer prevention, cervical cancer, Gardasil®, human papilloma virus (HPV), religiosity, vaccination

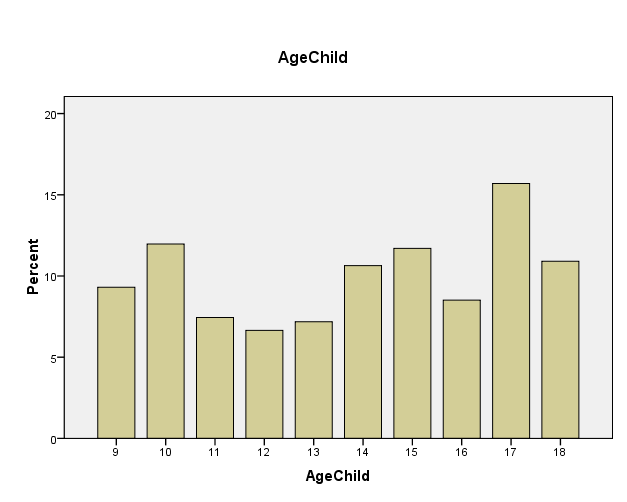
This survey cannot be used without express written permission from the author, Diane Reynolds ([diane.reynolds@liu.edu](mailto:diane.reynolds@liu.edu)) and separate permission from the authors of the *The Santa Clara Strength of Religious Faith Questionnaire (SCSORF)* and the *The Intrinsic/Extrinsic Religious Orientation Scale* *(ROS).*

**Characteristics of the Parents/Guardians in the Sample (*N*=323)**

|  |  |  |
| --- | --- | --- |
| **Age** | Mean  43.8 | Range 24-65 |
| **Age of daughter** Participants were asked to respond for 1 female child | 13.8 | 9-18 |
|  | **%** | ***n*** |
| **Gender** (*n* = 304, missing data = 19)  Male  Female | 5.3  94.7 | 16  288 |
| **Marital status** (*n* = 307, missing data = 16)  Divorced/widowed  Living with partner  Married  Separated, not divorced but living apart  Single  Prefer not to answer | 10.9  5.6  71.7  5.3  4.9  2.6 | 33  17  218  16  15  8 |
| **Race** (*n* = 315,missing data = 8)  Hispanic/Latino  White  African American  Other (Asian, American Indian, Pacific Islander)  Prefer not to answer | 7.9  78.1  11.5  4.0  10.5 | 24  218  32  11  30 |
| **Education** (*n* = 304, missing data = 21)  High school grad or GED  Some college  Associate’s degree  Bachelor’s degree  Master’s degree  Doctoral degree or higher  Prefer not to answer | 11.2  16.8  13.5  27.1  22.4  6.3  2.3 | 34  51  41  82  68  19  7 |
| **Religious Affiliation** (n=303; missing data = 20)  Catholic  Christian (non-Catholic)  Jewish  None  Other  Prefer not to answer | 63.0  19.8  5.6  5.6  3.9  2.0 | 191  60  17  17  12  6 |
| **How often attend religious services?** (*n* =304)  At least once a week or more often  Two or three times a month  Once every month or two  Rarely | 35.2  18.8  14.5  31.6 | 107  57  44  96 |
| **Health Insurance** (*n*=303, missing data 20)  Have health insurance  Do not have health insurance | 96.0  4.0 | 291  12 |
| Child covered under health insurance  Child not covered under health insurance | 97.0  3.0 | 294  9 |
| Think insurance plan covers HPV vaccination  Plan will not cover HPV vaccination  Not sure if plan will cover HPV vaccination | 66.3  3.6  30.0 | 201  11  91 |
| **Vaccination Intentions**  Intend to Vaccinate Daughter?  No intent to vaccinate or not sure?  Have vaccinated daughter? |  | 76  142  107 |

Unaccounted percentage is missing demographic data.

*Prefer not to answer* was recoded as missing data*.*



**Survey Questionnaire for Subjects**

The following questionnaire is for an adult 18 or older who is the primary care giver for a female child or children ages 9-18 years old.

There are no right or wrong answers to this survey. This study is being given to parents and care givers who care for children to help health care providers understand how they feel about new vaccines.

This survey deals specifically with questions about vaccines against Human Papillomavirus, which is also known as HPV.

I am interested in YOUR opinions about the HPV vaccine. Whether or not you decide you are in favor of or are against the vaccine, or whether or not your daughter has been vaccinated against HPV, your answers are important to me.

This survey usually takes approximately 15 minutes to complete.

THANK YOU FOR YOUR HELP!!!!!!

The first part of the questionnaire asks about your opinions about the HPV vaccine and cancer in general and the second part asks you about the importance of religion in your life. Your answers will be completely anonymous. Your replies will be confidential and used only for research purposes, so please be as honest as you can.

Any questions can be directed to Diane Reynolds………xxx-xxx-xxxx or diane.reynolds@liu.edu

For this survey, I am specifically interested in your opinion about the HPV vaccine for your female child who is between 9-18 years old. If you have more than one female child in this age range, please select ONE of your children in this age range and answer all of the questions in this survey specifically about this child.

Are you the parent or guardian of a 9-18 year old girl? Yes No (If no, end survey)

Please indicate the age of your child for whom you will answer this survey about. Age \_\_\_\_ years

Please indicate whether or not your child has already received the HPV vaccine and continue with the study.

* Has received the vaccine ----------🡪 skip intent questions
* Has NOT received the vaccine

1. **For each of the statements below, please mark the ONE response that is closest to your opinion.** Strongly Disagree /Disagree / Neutral / Agree / Strongly Agree
2. I worry that my child will get infected with HPV

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Newly available vaccines can be dangerous

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Treatments for abnormal Pap smears are really painful

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. A vaccine against HPV could benefit both men and women

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. I worry that my child will get infected with Hepatitis B

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Most people I know think it is a good idea to get children vaccinated against HPV before

they are teenagers

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Shots are extremely painful for my child

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Getting vaccines is a good way to protect my child’s health

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Cervical cancer is a deadly disease

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Having genital warts makes it really hard to find a sexual partner

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. I worry that my child will get a sexually transmitted disease someday

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Generally, I do what my child’s doctor recommends

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. Getting shots is really scary for my child

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. A vaccine against HPV could prevent future problems for my child

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

**2. For each of the statements below, please mark the ONE response that is closest to your opinion.** Strongly Disagree /Disagree / Neutral / Agree / Strongly Agree

a. It is possible that my daughter(s) will get cervical cancer in the future

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

b. I believe that cervical cancer is serious

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

c. My daughter(s) may one day be at risk of getting cervical cancer

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

d. I believe that cervical cancer has serious negative consequences

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

e. I believe that my daughter(s) will get cervical cancer one day

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

f. I believe that cervical cancer can be extremely harmful

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

g. It is likely that my daughter will get HPV one day

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

h. I believe that HPV can be extremely harmful

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

i. My daughter may one day be at risk of getting HPV

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

j. I believe that HPV can be serious

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

k. It is possible that my daughter will get HPV in the future

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

l. I believe that HPV can have serious negative consequences

Strongly Disagree € Disagree € Neutral € Agree € Strongly Agree €

1. **For each of the statements below, please mark the ONE response that is closest to your opinion. Strongly Disagree Disagree Agree Strongly Agree**
2. I would be very worried about side effects of HPV vaccination

Strongly Disagree € Disagree € Agree € Strongly Agree €

1. I don’t want to give my daughter too many vaccines

Strongly Disagree € Disagree € Agree € Strongly Agree €

1. Having the HPV vaccination might make girls more likely to have sex

Strongly Disagree € Disagree € Agree € Strongly Agree €

1. Girls who have had the HPV vaccine would be more likely to have unprotected sex

Strongly Disagree € Disagree € Agree € Strongly Agree €

1. Girls who have had the HPV vaccine would be more likely to have sex at an earlier age

Strongly Disagree € Disagree € Agree € Strongly Agree €

1. **Please read each of the following statements about HPV and indicate whether they**

**are true or false by ticking (√) the appropriate box**: True False Don’t Know

1. Genital warts are caused by HPV.

True € False € Don’t Know €

1. Condoms can prevent the spread of HPV from person to person.

True € False € Don’t Know €

1. People who have been infected with HPV might not have symptoms.

True € False € Don’t Know €

1. HPV infection can cause abnormal Pap smears.

True € False € Don’t Know €

1. HPV is a sexually transmitted disease.

True € False € Don’t Know €

1. HPV infection makes you unable to have children

True € False € Don’t Know €

1. Having an abnormal Pap smear means you have cervical cancer

True € False € Don’t Know €

1. Having many sexual partners increases the risk of getting HPV

True € False € Don’t Know €

1. HPV is related to the AIDS virus

True € False € Don’t Know €

1. HPV can be treated with antibiotics

True € False € Don’t Know €

1. HPV usually goes away without needing any treatment

True € False € Don’t Know €

1. Most (sexually active) people will get HPV at some point in their lives

True € False € Don’t Know €

1. Men cannot get HPV

True € False € Don’t Know €

1. Receiving HPV vaccination means Pap smears will no longer be necessary

True € False € Don’t Know €

**5a. How do you think the following people would feel about your child getting the HPV vaccine?**

*Please mark ONE answer for each group.*

Would be happy Would be upset my Wouldn’t care Don’t know Not applicable

my child got child got

a.Your spouse/partner € € € € €

b. Your child’s siblings € € € € €

c. Your friends € € € € €

d. Your child’s physician € € € € €

e. Other family members € € € € €

**5b. How important is it to you that the following people agree with your decision to vaccinate or not vaccinate your child against HPV?**

Extremely important somewhat important not sure somewhat unimportant Not important at all

a.Your spouse/partner € € € € €

b. Your child’s siblings € € € € €

c. Your friends € € € € €

d. Your child’s physician € € € € €

e. Other family members € € € € €

**6. Please answer YES or NO to the following questions**:

a.To your knowledge, have you or anyone close to you, ever had an abnormal Pap smear?

Yes € No €

b. To your knowledge, have you, or anyone close to you, ever had cervical cancer?

Yes € No €

c. To your knowledge, have you, or anyone close to you, ever had a sexually transmitted disease? Yes € No €

d. To your knowledge, have you, or anyone close to you, ever had genital warts?

Yes € No €

**7. What percentage of parents do you think want HPV vaccination for their daughter?** *Please check ONE response*.

€ 10% or less € 20% €30 % € 40 % € 50 % € 60 % € 70 % € 80 % € 90 % € 100%

**8. Please indicate the ONE response to the following statements/questions:**

Definitely Not Probably Not Not Sure Yes probably Yes definitely

1. I intend to have my daughter receive the HPV vaccine.

Definitely Not € Probably Not € Not Sure € Yes probably € Yes definitely €

1. I intend to have my daughter receive the HPV vaccine within this calendar year

Definitely Not € Probably Not € Not Sure € Yes probably € Yes definitely €

1. During the next visit to the pediatrician or other health care professional, I intend to get my daughter vaccinated against HPV?

Definitely Not € Probably Not € Not Sure € Yes probably € Yes definitely €

1. I plan to schedule a visit with pediatrician or other doctor with the intent to vaccinate my daughter against HPV.

Definitely Not € Probably Not € Not Sure € Yes probably € Yes definitely €

**9. Please indicate the earliest age at which you think girls should be vaccinated against HPV.**

€ 8 or younger € 9 € 10 € 11 € 12 € 13 € 14 € 15 or older € never

**10. Have you received any information regarding HPV vaccination**?

Yes, continue No, end questions

Please indicate your source of information regarding HPV vaccination. Check all that apply.

Pediatrician €

Other health care provider €

Nurse €

Spouse or partner €

Family member €

Friend €

Other: please indicate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Internet €

Television €

Newspaper/Magazine €

Other media: please indicate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please answer the following questions about religious faith using the scale below. Indicate the level of agreement (or disagreement) for each statement.

(1) Strongly disagree (2) Disagree (3) Agree (4) Strongly Agree

# \_\_\_\_\_\_1. My religious faith is extremely important to me.

\_\_\_\_\_\_2. I pray daily.

\_\_\_\_\_\_3. I look to my faith as a source of inspiration.

\_\_\_\_\_\_4. I look to my faith as providing meaning and purpose in my life.

\_\_\_\_\_\_5. I consider myself active in my faith community

\_\_\_\_\_\_6. My faith is an important part of who I am as a person.

\_\_\_\_\_\_7. My relationship with God, Allah, Budda…. is extremely important to me.

\_\_\_\_\_\_8. I enjoy being around others who share my faith.

\_\_\_\_\_\_9. I look to my faith as a source of comfort.

\_\_\_\_\_\_10. My faith impacts many of my decisions.

**Continue the survey answering the following questions. Indicate the level of agreement (or disagreement) for each statement, using the following scale**

**(1) Strongly Agree (2)Agree (4) Disagree (5) Strongly Disagree**

\_\_\_\_\_\_1. What religion offers is comfort when sorrow and misfortune strike.

\_\_\_\_\_\_2. I try hard to carry my religion over into all my other dealings in life.

\_\_\_\_\_\_3. Religion helps to keep my life balanced and steady in exactly the same way as my citizenship, friendships, and other memberships do.

\_\_\_\_\_\_4. One reason for my being a religious community member is that such membership helps to establish a person in the community.

\_\_\_\_\_\_5. The purpose of prayer is to secure a happy and peaceful life.

\_\_\_\_\_\_6. It doesn’t matter so much what I believe as long as I lead a moral life.

\_\_\_\_\_\_7. Quite often I have been keenly aware of the presence of a higher power or of the Divine Being.

\_\_\_\_\_\_8. My religious beliefs are what really lie behind my whole approach to life.

\_\_\_\_\_\_9. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services.

\_\_\_\_\_\_10. Although I am a religious person, I refuse to let religious considerations influence my everyday affairs.

\_\_\_\_\_\_11. The religious community is the most important as a place to formulate good social relationships.

\_\_\_\_\_\_12. Although I believe in my religion, I feel there are more important things in life.

\_\_\_\_\_\_13. If I were to join a church group I would prefer to join a faith based study group rather than a social fellowship.

\_\_\_\_\_\_14. I pray chiefly because I have been taught to pray.

\_\_\_\_\_\_15. Religion is especially important to me because it answers many questions about the meaning of life.

\_\_\_\_\_\_16. A primary reason for my interest in religion is that my church, temple, mosque… is a congenial social activity.

\_\_\_\_\_\_17. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well being.

\_\_\_\_\_\_18. It is important to me to spend periods of time in private religious thought and meditation.

\_\_\_\_\_\_19. The primary purpose of prayer is to gain relief and protection.

For questions 20 and 21 please answer A, B, or C or D

20. If not prevented by unfavorable circumstances, I attend religious services A). at least once a week or oftener, B). two or three times a month, C). once every month or two, or D). rarely.

21. I read literature about my faith A). frequently, B). occasionally, C). rarely, D). never.

**Now I would like to know some information about you.**

1. What is your age? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(years)
2. What is the age of the daughter you were thinking about when you completed the questionnaire ?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(years)
3. Are you

€ female

€ male

1. Are you:

€ divorced/widowed

€ living with partner

€ married

€ separated, not divorced but living apart

€ single

1. Are you Hispanic/Latino? Yes € No €
2. How would you describe yourself? Check all that apply

€ American Indian or Alaskan Native

€ Asian

€ Black or African-American

€ Native Hawaiian or other Pacific Islander

€ White

1. What is the highest level of education you have attained?

€ less than high school

€ high school graduate or GED

€ some college

€ associates degree

€ master’s degree

€ doctoral degree or higher

1. What is your religion?

€ Buddhist

€ Catholic

€ Christian (non-Catholic)

€ Hindu

€ Jewish

€ Muslim

€Sikh

€ None

€ Other please indicate\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Do you have health insurance? € Yes € No
2. Is your child covered under a health insurance plan? € Yes € No
3. Do you think the health insurance plan covers the cost of vaccination against HPV?
   1. No €
   2. Yes €
   3. Don’t know €

Thank you for your participation. For more information on HPV, you can visit :

<http://www.cdc.gov/std/hpv/STDFact-HPV-vaccine.htm>