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# The Development Of A Survey To Analyze If The Hpv Vaccine Is Appropriate For School Aged Girls

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**THE DEVELOPMENT OF A SURVEY TO ANALYZE IF THE HPV VACCINE  
IS APPROPRIATE FOR SCHOOL AGED GIRLS**

by

**TIFFANY F. DAVIS**

**THESIS**

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

**MASTER OF EDUCATION**

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MAJOR: EDUCATIONAL EVALUATION and

RESEARCH

Approved By:

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Advisor

Date

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## CHAPTER 1

### INTRODUCTION

A quiet epidemic, the Human Papilloma Virus (HPV) is a sexually transmitted disease (STD), which is the leading cause of genital warts and cervical cancer in women (Markowitz, 2001). According to American Teacher (2007), a debate exists among parents regarding use of the cervical cancer vaccine named Gardasil, which is being manufactured by Merck & Co. The U.S. Food and Drug Administration approved this vaccine on June 8, 2006. The HPV vaccine intended to be administered to young girls and women ages nine through twenty six. The purpose of the vaccine is to help minimize the risk of cervical cancer.

#### Vaccine Concerns

According to NCSL (2011), CDC reports that approximately 20 million people in the United States are infected with HPV. There is no treatment for HPV as there are 30 strains of HPV that can affect at least half of sexually active people and there are no symptoms of which can disappear on their own (NCSL, 2011). Merck's Gardasil is a vaccine that can target four strands of HPV that are linked to cervical cancer and genital wart cases (NCSL, 2011). A societal concern is that the vaccine may encourage young girls to become sexually active (Caputo, 2007). "It seems unlikely that a vaccine that prevents a small number of sexually transmitted infections which have no symptoms will cause girls to be promiscuous or have unsafe sex, as some have suggested" (NNII, 2007 p.3). One parent, Brenda Janssen, expressed her disagreement to the vaccine as she has taught her children against pre-marital sex and she believes that if the vaccines are required by the government that will give teenagers the idea

that pre-marital sex is ok (Caputo, 2007). Another concern of the use of the vaccine is the acceptance factor as those who approve of the vaccine may disagree with mandating it for student immunization. The reason is because there are concerns about the drug costs, safety and parental rights (NCSL, 2011).

It is not known if the vaccine has adverse side effects resulting from long- term effects. “Since our experience with this new vaccine is limited and not all women are exposed to high risk HPVs, some girls could experience rare vaccine adverse events not yet identified without a corresponding benefit”(NNII, 2007 p.3). The duration of the vaccine is unclear. Current studies indicate that the vaccine is effective for at least five years and there is research still being done to determine how long the protection will last (CDC, 2006).

### **Operational Definitions**

Gardasil is one of the first vaccines developed for HPV and was licensed by the FDA in June 2006. Gardasil protects against HPV types 6, 11, 16, and 18 (CDC, 2006). The vaccine has been recommended to be administered to girls between the ages of 11-12 or as early as the age of 9. It is recommended that the vaccine is administered prior to the onset of sexual activity (CDC, 2006). According to NNII (2007), it is also recommended that the vaccine be administered to females who may be sexually active, but have not yet been exposed to HPV. Gardasil has been tested on over 11,000 females (9-26 years of age) throughout various countries to include the United States (CDC, 2006). The clinical trials have proven to be 100% effective in preventing these specific strains of HPV (Kaiser, 2007). Despite the proven clinical



trials, there is a constant debate as to whether the vaccine should be a required vaccine for school aged girls.

The adverse side effects of the vaccine are a major concern for many parents. “The most common side effects with Gardasil are: pain swelling, itching, bruising and redness at the injection site; headache; fever; nausea; dizziness; vomiting, and fainting” (Merck & Co., 2012 p.1). Long term side effects are unknown due to the originality of the vaccine. According to CDC (2006), in June 2006, the ACIP voted to recommend the first vaccine developed to prevent cervical cancer and other diseases in females caused by certain types of genital HPV. Gardasil protects against four types of HPV of which 70% causes cervical cancer and 90% causes genital warts. The vaccine has been recommended for girls and women ages nine to twenty six only. The HPV vaccine is administered through a series of three shots over a 6-month period. (CDC, 2006). Females should be given the vaccine before they are sexually active. The vaccine is most effective in girls/women who have not yet acquired any of the four HPV types covered by the vaccine. However, females who are sexually active may also benefit from the vaccine. Very few young women are infected with all four types of these HPV types. Thus, they would still get protection from those types they have not acquired (CDC, 2006).

### **Legal Limitations**

Gardasil has been suggested as a mandatory vaccine to administer to girls before entering high school. According to Lancet (2006 p.1), “The Michigan Senate passed a bill on September 21, 2006, ruling that all girls entering sixth grade of school should be immunized.” Despite Michigan’s acceptance of this bill, it wasn’t received the same in other states,

therefore, the bill was not enacted in each state. For instance, in 2007, Texas Governor Rick Perry supported the bill, but it was rejected by legislation (Dart, 2011). Due to concerns about Gardasil, the federal panel opposed mandating it as a condition of school enrollment (Dart, 2011). According to Dart (2011), Texas lawmakers approved a bill which prohibits officials from requiring administration of the vaccine for four years. According to NCLS (2011), since 2006, in at least 41 states plus Washington, D.C., legislation has introduced the bill to require the vaccine, fund, or educate the public about the HPV Vaccine, and at least 20 states have enacted legislation. One of the debates for the use of the HPV vaccine is that the quadrivalent HPV vaccine will not eliminate the need for cervical cancer (Markowitz, 2007). Reason being, not all HPV types that cause cervical cancer are included in the contents of the vaccine (Markowitz, 2007).

### **What is HPV?**

A major component of contracting HPV is the risk of having genital warts or cervical cancer. HPV is a disease that can be contracted by oral, vaginal penetration, and rubbing of the genitals. The use of condoms may not prevent the contraction of HPV, but it can certainly decrease the chances of contraction. According to NNII (2007), does state that the consistent use of condoms can be related to whether HPV will progress to cervical cancer. If a woman has a sexually transmitted disease and it is not treated or it is a reoccurring disease it can aid to the progression of having cervical cancer.

A person can contract the disease and be unaware because the symptoms may be dormant and in a non-detective state. HPV can lead to cervical cancer which is why the

discussion of vaccine use is debated whether it is necessary to require for administration starting with school age children and teenagers to help prevent the transmission of HPV once a person becomes sexually active. Another question is if the vaccine is effective for women who are already sexually active. HPV can be detected through pap smears. Irregular results from a pap smear would lead to a repeat checkup in six months. Males may never know that they have contracted it because genital warts may not develop and they have a low risk of developing anal or penile cancer, therefore, the signs of transmission is not easily detected. Many are misdiagnosed when genital warts appear because they are diagnosed with having herpes. According to Markowitz (2007 p.2), “Genital HPV is the most common sexually transmitted infection in the United States; an estimated 6.2 million persons are newly infected every year.” Unfortunately, HPV has not received the same national attention as other STDs despite the high number of cases. According to Markowitz (2007), it was reported in 2007 that an estimated 11, 100 cases were diagnosed and approximately 3,700 will die from cervical cancer.

## CHAPTER 2

### LITERATURE REVIEW

According to Mayeux (2005), the way to help people accept the vaccine is provide education and awareness of HPV and the vaccine. Persistent genital HPV infection can cause cervical cancer in women to include other types of anogenital cancers and genital warts in both men and women (Markowitz, 2007). It is important to understand that there are high and low risks of HPV. Low risk types can cause benign cervical cell changes and genital warts. High-risk types act as carcinogens in the development of cervical and other anogenital cancer (Markowitz, 2007). “The FDA acknowledges that sexual activity with multiple partners is an essential part of the lifecycle of this virus” (Harrub, 2006 p.1-2). Continued education of the risk of cycling sexual activity is a must to help people understand that HIV/AIDS and other STD’s are not the only concerns of changing sexual partners. Once people learn that HPV is not like other STD’s as it is a gateway that leads to cancerous diseases that can be challenging to cure.

Many parents are concerned that the HPV school vaccination is only for girls. A school vaccination should not be required for one gender. The vaccine was approved for boys and young men in 2009 that protects against genital warts and is not recommended for pregnant women. Markowitz’s (2007) review of the vaccine states that, despite the low rates of genital warts, anal and penile cancers, men may still benefit from the vaccine as well. However, there has not been enough research to show the effectiveness in either of these categories. Data in 2007, stated that the HPV vaccine is not licensed to administer to males due to lack of data provided for the efficacy in males for any age category (OHSU, 2007). The more information

acquired about HPV, the better. Abstaining from sexual activity is the surest way to prevent genital HPV infection. Otherwise, a monogamous relationship with an uninfected partner is a secondary strategy to help prevent future genital HPV infections.

The idea of making the HPV vaccine mandatory in schools has been debated by legislation. There are no federal laws that require girls or adolescent females to get vaccinated for cervical cancer or genital warts. The other issue or concerns regarding the HPV vaccine are: parental concerns, decrease of cervical cancer screening, and questions regarding effectiveness of vaccine. A parental concern is whether administering the vaccine to girls will encourage sexual activity and lead to adverse effects. The second concern is whether immunized women will stop seeking cervical cancer screenings. Finally, another concern is if the vaccine will actually reduce transmission. (NNII, 2007)

The CDC requires vaccinations to protect children from various types of disease. As for the HPV vaccination, the CDC has made universal recommendation for school age girls to receive the vaccination. The universal recommendation is to help remove a stigma associated with the HPV vaccine and make the vaccine eligible for funding (NNII, 2007). Most states permit religious and /or philosophical exemptions, in addition to exemption for medical contraindications. The discussion of the HPV vaccine is so that it can be added to the list of vaccines that is currently required for children to attend school. There have to be a lot of questions answered before all United States legislations will be onboard with this vaccine requirement.

Due to Merck being the only company currently producing the vaccine, they have a huge financial incentive to persuade states to mandate Gardasil. However, the controversy of the vaccine has caused Merck to lobby its push to have state lawmakers require the vaccine for preteens (American Teacher, 2007). After word was out on the fact that Texas Gov. Rick Perry gained financial contributions from Merck to mandate the vaccine, the state House rescinded the order (American Teacher, 2007). According to American Teacher (2007), the push for mandate is the cause for the controversy stir rather than the vaccine itself. “The Texas Medical Association advises: Mandating a vaccine for a disease not spread by casual and/or occupational contact, only available to one gender represents considerable departure from past practice” (American Teacher, 2007, p.4). Many parents are confused on whether to have their daughter vaccinated or not due to their son is not required to receive the same vaccination. “On the other hand, Jo-Ann Lynch, a member of the Albuquerque, N.M. Teachers Federation, is a cervical cancer survivor who believes mandating the vaccine for school use is good” (American Teacher, 2007, p.4). In New Mexico, lawmakers are considering legislation that would require sixth grade girls be vaccinated for the HPV disease. According to American Teacher (2007), parents are hesitant to discuss cervical cancer with a twelve year old. Another concern of the vaccine mandate is that it will be considered a license for sexual activity among young adults (American Teacher, 2007). Vaccine or not parents need to talk to their children about diseases spread through sexual intercourse.

## CHAPTER 3

### METHODOLOGY

#### *Research design*

The knowledge of the drug Gardasil for cervical cancer, and HPV based on data collected through surveys administered will be reviewed. A survey was administered to collect data for further discussion of this topic. The demographics of the surveyors will also be explored to determine if it's a significant factor of the survey results. Homogeneous selection of participants were used to conduct the experiment due to the fact that the independent variables are women or gender specific. This procedure will be used to control the gender of the experiment. Women were randomly assigned individuals to take the survey. The participants were women who are also mothers located either in the inner-city or rural area. It was important to attain information from mothers on their knowledge of HPV, the HPV vaccine, whether they would want the HPV immunization be a requirement or optional and how they will most likely seek information on HPV and the HPV vaccine.

#### *Research Hypothesis*

The hypothesis of the study is that the results will prove that lack of knowledge of HPV and the HPV vaccine can contribute to the decision of a mother allowing her school age child to be administered the vaccine whether by school mandate or voluntarily.

#### *Research Protocol*

Assistance was requested from an educator colleague to administer the survey (Appendix B) to the sample of women in the state of Michigan in the rural area and the primary surveyor administered the survey to women in the inner-city. A letter was distributed

to each participant providing information on the purpose of the survey and request for completion (Appendix A) prior to completing the survey.

### *Sample*

The survey was administered to forty-three women from Michigan who identified themselves as mothers. The sample included 20 white females and 23 black females who completed the survey. Thirty-nine of the participants had children between the ages of nine to nineteen and four had children either below the age of nine or older than nineteen. The data was computed through a one-way sample (Table 3) and ANOVA (Table 4) to analyze the participant responses to the questions regarding the knowledge of HPV, the HPV vaccine and whether that affects the participant's decision to allow their daughter to receive the vaccine and their opinion as to whether they believe the vaccine should be school mandated.

### *Instrument*

Participants completed the *Survey on Parental Choice for HPV for Daughters* (Appendix B). The survey was designed to be anonymous, therefore, participants would not have to be concerned with the identity of their answers being disclosed in reporting. The questionnaire consisted of three subscales and sixteen questions. These subscales measured the age of daughter to correlate the age groups to the question on the mother's willingness to have their daughter vaccinated, the mother's willingness to have daughter vaccinated as school mandate, the mother's knowledge of HPV and HPV vaccine, and the demographics of the mothers to include race, and marital status.

### *Data Analysis*



The data analysis techniques that will be used include review of survey data through SPSS output of results. Each survey will be reviewed and the data from each survey will be tallied according to each question. As the numbers of answers are grouped, the results will be input into SPSS for further analysis. Descriptive statistics of the mean averages of participants who have daughters, the participant knowledge of HPV, and their knowledge of the HPV vaccine will be reflected in the table data. Cronbach's Alpha is .883 for questions 6, 7 and 14. Tables 6, 7 and 8 will reflect the data analysis of the reliability for those three survey questions. The bar figures reflect the data of the survey results according to the race demographic. It became evident in reviewing the survey results that the race demographic was most significant on the impact of the participant responses.

## CHAPTER 4

### RESULTS

Figure 1 shows one of the demographic factors of race in the survey. The number of participants who identified as white were 20, while there were 23 participants who identified as black. The descriptive statistics (Table 1, Figure 1) for the question of whether each participant has a daughter describes the mean answer for the responses. As 1=yes, 2=no, 3=no answer, the most common answer was yes in that 39 participants have daughters. Figure 1 shows the N Sample of 43 participants according to race.

TABLE 1 – DESCRIPTIVE STATISTICS of PARTICIPANTS

N sample of 43 mothers who do or do not have daughters.

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
None	43	1	43	22.00	12.557
{1, yes; 2, no; 3 no answer}	43	1	2	1.09	.294
{age 9-19}	43	1	3	1.21	.466
Valid N (listwise)	43				

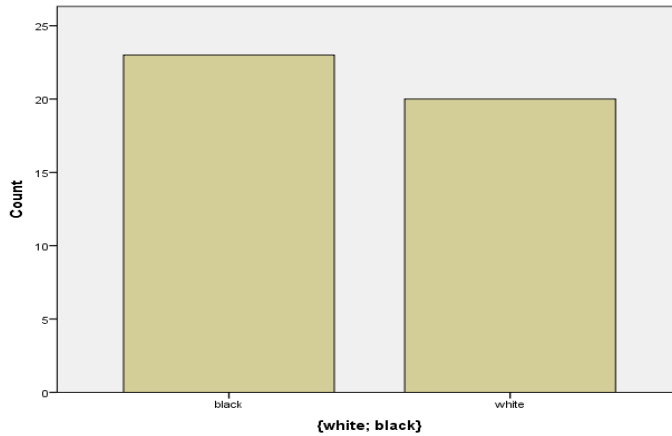


FIGURE 1 – ETHNICITY DEMOGRAPHICS

Table 2 describes those responded to the survey question of their knowledge of HPV and the HPV vaccine. The continuous variable for this question included: 1=very likely, 2=somewhat likely, 3=somewhat unlikely, 4=very unlikely, and 5=don't know. The results showed that the mean average answer was the same (2.37) for both questions which was 2 = somewhat likely of the participants having knowledge of both HPV and HPV vaccine. Figure 2 shows that black mothers acknowledged having the greatest amount of knowledge of both HPV and the HPV vaccine. White mothers answered most of only being somewhat unlikely of having knowledge of the two variables (Figure 2).

TABLE 2 – HPV & HPV VACCINE KNOWLEDGE

Those who have knowledge of HPV (1<sup>st</sup> row); those who have knowledge of HPV vaccine (2<sup>nd</sup> row).

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
None	43	1	43	22.00	12.557
{1, very likely; 2, somewhat likely; 3, somewhat unlikely; 4, very unlikely; 5, unsure}	43	1	5	2.37	1.113
{1, very likely; 2, somewhat likely; 3, somewhat unlikely; 4, very unlikely; 5, unsure}	43	1	5	2.37	1.113
Valid N (listwise)	43				

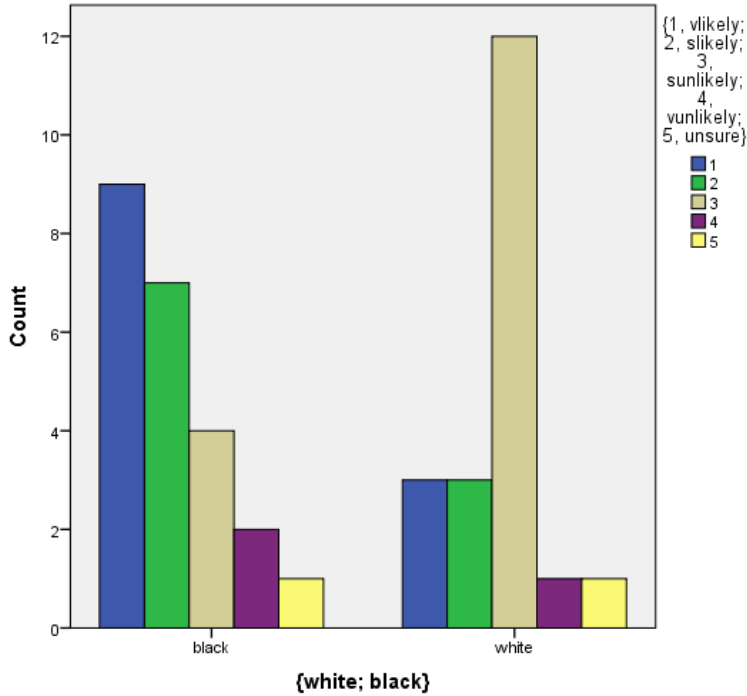


FIGURE 2 - HPV KNOWLEDGE

This bar graph reflects the survey participant’s knowledge of HPV. The results are reflected by the race demographic of the participants.

Table 3 shows the standard mean answer is 1.58 where the participants answered yes to whether they will allow their daughter to receive the HPV vaccine and those who believe that the vaccine should be mandatory. The standard deviation for those who will allow their daughter to receive the vaccine is .626 while the standard deviation for those who believe the vaccine should be mandatory is .391. The difference in standard deviations shows that according to Figure 3, 12.5 white participants stated they would allow their daughter to receive the vaccine while 12.5 of black participants stated that they would not allow their daughter to receive the vaccine. Both the black and white participants were equal in stating that they do not believe the vaccine should be mandatory (Figure 3).

Table 3 reflects the responses to the following questions: those who will allow daughter to receive vaccine (1<sup>st</sup> row); those who believe it should be mandatory (2<sup>nd</sup> row).

TABLE 3 – PARTICIPANTS RESPONSE ON VACCINE ADMINISTRATION

One-Sample Statistics	N	Mean	Std. Deviation	Std. Error Mean
None	43	22.00	12.557	1.915
{1, yes; 2, no; 3, no answer}	43	1.58	.626	.095
{1, yes; 2, no; 3, no answer}	43	1.88	.391	.060

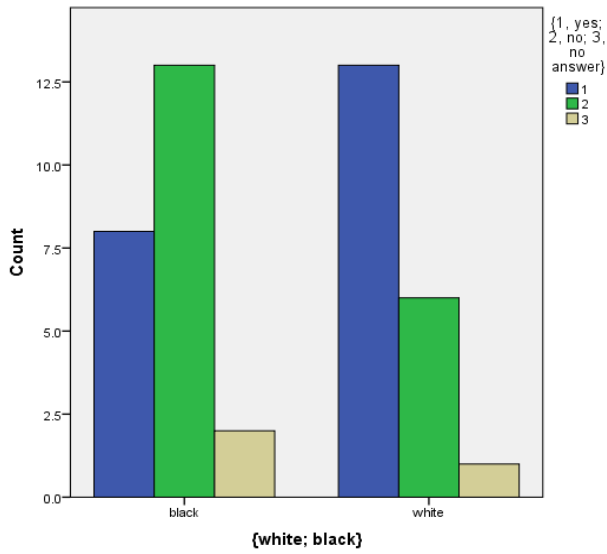


FIGURE 3 – PARTICIPANT RESPONSE TO DAUGHTER RECEIVING VACCINE

This bar graph reflects the results to the question: Will you allow your daughter to receive the HPV vaccine? The results were reflected based on the race

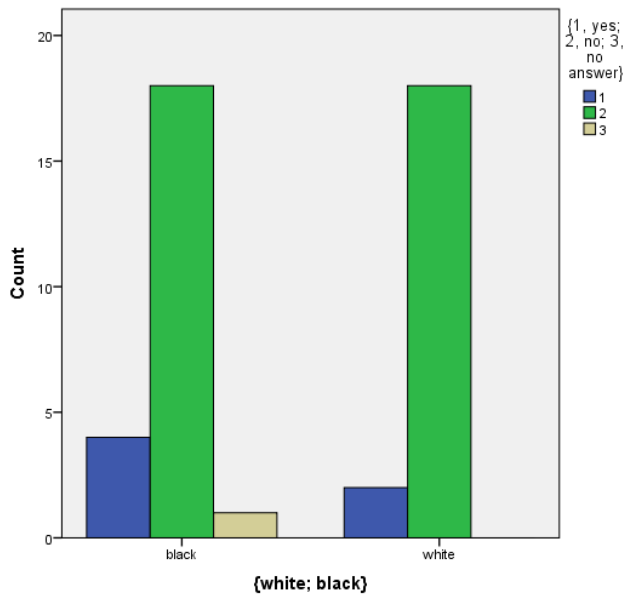


FIGURE 4 – PARTICIPANT RESPONSE TO MANDATORY VACCINE

This bar graph reflects those participants who believe the vaccine should be mandatory. The results are reflected by the race demographic.

Table 4 is the one-way ANOVA data which shows that 20 participants answered yes to allowing their daughter to receive the HPV vaccine (significance level .764). The degrees of freedom (df) showed that four participants had no answer in response to this question. The degrees of freedom was the same, however, 35 participants answered no to the question as to whether the HPV vaccine should be school mandated (significance level .461).

Table 4 reflects answers of the question regarding the knowledge level of the HPV vaccine. The participants answered whether they would let their daughter receive the vaccine. The third row was of those who agree whether the vaccine should be school mandated.

TABLE 4 – ANOVA DATA OF VACCINE QUESTION

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
None	Between Groups	414.583	4	103.646	.634	.641
	Within Groups	6207.417	38	163.353		
	Total	6622.000	42			
{1, yes; 2, no; 3, no answer}	Between Groups	.761	4	.190	.460	.764
	Within Groups	15.704	38	.413		
	Total	16.465	42			
{1, yes; 2, no; 3, no answer}	Between Groups	.569	4	.142	.923	.461
	Within Groups	5.850	38	.154		
	Total	6.419	42			

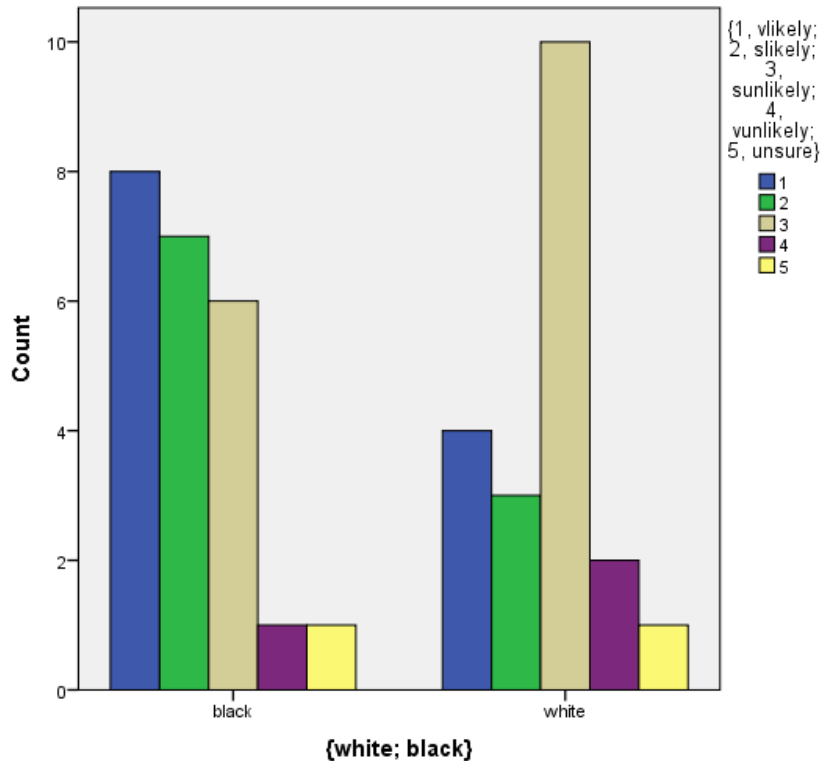


FIGURE 5 - KNOWLEDGE OF VACCINE

This bar graph reflects the participant response of their knowledge of the HPV Vaccine according to the race demographic.

The results of the survey suggests that a mother's knowledge of the HPV vaccine does have an effect on their decision to allow their daughter to receive the vaccine. The Pearson correlation  $-0.044$  as shown in Table 5, shows that those who answered "very likely" to having knowledge of the HPV vaccine were more likely to approve their daughter receiving the vaccine. The data below is based on a two-tailed significance level of  $.777$ . It is likely, that this survey can be used on a test-retest reliability basis and draw very similar results as the participants will most likely provide the same responses. The overall theme is that knowledge of a subject matter does play a role in how a person makes a decision.



Table 5 reflects those who answered if they would allow their daughter to receive the vaccine based on their knowledge of the HPV vaccine.

TABLE 5 – CORRECLATIONS

<b>Correlations</b>			
		{1, yes; 2, no; 3, no answer}	{1, vlikely; 2, slikely; 3, sunlikely; 4, vunlikely; 5, unsure}
{1, yes; 2, no; 3, no answer}	Pearson Correlation	1	-.044
	Sig. (2-tailed)		.777
	N	43	43
{1, vlikely; 2, slikely; 3, sunlikely; 4, vunlikely; 5, unsure}	Pearson Correlation	-.044	1
	Sig. (2-tailed)	.777	
	N	43	43

Table 6 reflects the mean and standard deviations for questions 6, 7 & 14. Question 6 asks the knowledge level of HPV. Question 7 asks the knowledge level of the HPV vaccine. Question 14 asks the interest level of attaining more information on both HPV and the HPV vaccine.

TABLE 6 – ITEM STATISTIC FOR QUESTIONS 6, 7 & 14

<b>Item Statistics</b>			
	Mean	Std. Deviation	N
{1, vlikely; 2, slikely; 3, sunlikely; 4, vunlikely; 5, unsure}	8.60	5.595	5
{1, vlikely; 2, slikely; 3, sunlikely; 4, vunlikely; 5, unsure}	8.80	6.535	5
{1, vlikely; 2, slikely; 3, sunlikely; 4, vunlikely; 5, unsure}	8.60	7.232	5

Table 7 reflects the Cronbach's Alpha for questions 6, 7 and 14. Question 6 and 7 (list item 1 & 2) inquires the knowledge level of either HPV or the HPV vaccine. Question 14 (list item 3) inquires the interest level to attain more information regarding HPV and the HPV vaccine.

TABLE 7 – CROBACH'S ALPHA

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
{1, vliikely; 2, sliikely; 3, sunliikely; 4, vunliikely; 5, unsure}	17.40	150.300	.914	.736
{1, vliikely; 2, sliikely; 3, sunliikely; 4, vunliikely; 5, unsure}	17.20	136.200	.840	.772
{1, vliikely; 2, sliikely; 3, sunliikely; 4, vunliikely; 5, unsure}	17.40	146.800	.616	.992

Table 8 analyzes the variance in the answers for questions 6, 7 and 14. These were the questions in the survey that had a direct impact on the participant response as to whether they will allow their daughter to receive the HPV vaccine and if it should be school mandated.

TABLE 8 – SCALE STATISTICS FOR QUESTIONS 6, 7 & 14

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
26.00	307.000	17.521	3

## CHAPTER 5

### CONCLUSION

The goal of this study was to determine if or when parents should have their daughters vaccinated for the HPV vaccine. According to the survey results, the age of the children was a major consideration as various states have been debating if it should be a mandatory school vaccination. The results showed that there was no demographic correlation between the demographics of the participants specifically the race and marital status. However, as shown in the previously recorded data in Chapter 3, the survey participants still believed that the vaccine should not be mandatory despite their knowledge level or their willingness to allow their daughter to receive the vaccine. The level of knowledge is what contributes to the concerns about the HPV vaccine.

This study is an introduction to this current and rising issue and the sample size is relatively small. The Gardasil commercial, in which the girls state that they could be “one less” woman to develop cervical cancer, and the rumor that Gardasil was going to become a new vaccination for middle school girls were the inspirations on the decision to implement this small study. There are several limitations to this study. One limitation is that there weren’t many parents who elaborated on their answers. A second limitation was that demographics were not a factor in the validation of this study. A third limitation was that the study was only performed in two areas within the state of Michigan, therefore, the results do not speak enough to the general population of parental awareness of HPV and the HPV vaccine.

In summary of the survey, the number of mothers who answered yes to the question as to whether they would allow their daughter to receive the vaccine was 20. Only 7 mothers believed the HPV vaccine should be school mandated. Despite any level of knowledge of both HPV and the HPV vaccine, this study shows that it is preferred for the parent to have a choice in the decision of having the vaccine administered to their daughter. Many parents are not educated on the disease. Through this study, the participant answers were dominant in the “somewhat unlikely” category of answers when asked about their knowledge of HPV and the HPV vaccine. The level of knowledge does play a significant role in their views about the vaccine. Another parental concern is the long and short term effects of the disease. The education of a vaccination is important to parents because the disease could have side effects that they may want to prevent but have no knowledge of or the disease may be one that they will let their child decide as they get older. The vaccination may have severe side effects or other long term effects. Additionally, the moral concern of the use of the vaccination is to be considered as it can be viewed as a form of encouragement for children and teens to have pre-marital sex.

A concern regarding the acceptance of the vaccine is the mandate implemented by various states to make the vaccine mandatory for school age girls before they enter high school. Many parents may disagree with the vaccination because it only affects females. They may have other issues with the climbing number of vaccinations that are mandatory in schools. An additional concern is if parents will have the option to opt out of having their daughter take the vaccine.

This is clearly a topic that needs to be furthered discussed within the healthcare, government and educational systems to make the best suited decision on the vaccine mandate. It is also imperative to provide more educational tools to parents so they can make the right decision for their child. Bringing awareness on HPV and the vaccine options will definitely contribute to addressing the concerns of HPV and the potential health issues this disease can lead towards.

**APPENDIX A**

To Whom It May Concern:

I am seeking parents of girls to participate in a mini educational study by this survey enclosed to help me complete my Masters of Education degree in Research and Evaluation. I attend Wayne State University and am an elementary teacher with Detroit Public Schools. My thesis is titled "Women Perception on Daughter Receive the Cervical Cancer Vaccine as a School Mandate?" the premise came from an article that I read in the American Teacher. The article stated that Michigan was one of the states debating if the cervical cancer vaccine, "Gardasil", should become a mandated vaccine for school. Therefore, I became interested in what parents of students thought, so that brings me to asking you to participate in a mini educational survey to help me complete my thesis. If you have any questions feel free to contact me via e-mail: [tiffany77@comcast.net](mailto:tiffany77@comcast.net) subject: Gardasil. Feel free to pass it along to other parent with daughters. The more surveys completed the better.

Educationally Yours,  
Tiffany F. Davis  
Wayne State Student



12. Magazines, books, television

13. School District

Very Likely    Smwt likely    Smwt unlikely    Very unlikely    Don't know

14. How interested are you in getting information about HPV or its vaccine?

15. What is your marital status?

Married    Single    Live w/ Someone    Divorced    Widowed

16. What is your race?

White    Black    Hispanic    Asian    Other



## APPENDIX C

## Survey Results on Parental Choice of HPV for Daughters

1. Do you have a school age daughter?	Yes (39)	No (4)			
2. If yes on question 1, continue					
Is she between the age of 9- 19?	Yes (35)	No (8)			
3. Which age group, if more than one (1) daughter circle all that applies or complete more than one (1) survey?					
	9yrs -11yrs (12)	12yrs -15yrs (13)	16yrs -19yrs (20)		
4. Would you allow your daughter to receive the HPV vaccine?					
	Yes (20)	No (19)	(4) Undecided		
5. Do you think it should be a mandatory school vaccine?					
	Yes (7)	No (35)			
	Very Likely	Smwt likely	Smwt unlikely	Very unlikely	Don't know
6. How much do you know? about HPV?	11	10	16	3	3
7. How much do you know about the HPV vaccine?	11	10	18	2	3
How likely are you to get information about HPV or the HPV vaccine from these sources?					
	Very Likely	Smwt likely	Smwt unlikely	Very unlikely	Don't know
8. A doctor, nurse, or health care provider	20	15	6	1	1
9. Internet	8	13	8	6	5
10. Family members	3	8	8	15	8
11. Friends	13	15	10	3	2

12. Magazines, books, television	3	18	8	12	2
	Very Likely	Smwt likely	Smwt unlikely	Very unlikely	Don't know
13. School District	5	12	7	13	6
14. How interested are you in getting information about HPV or its vaccine	19	11	9	4	0

15. What is your marital status?

Married (29) Single (9) Live w/ Someone (1) Divorced (4) Widowed(0)

16. What is your race?

White (20) Black (23) Hispanic (0) Asian (0) Other (0)

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**ABSTRACT****THE DEVELOPMENT OF A SURVEY TO ANALYZE IF THE HPV VACCINE IS APPROPRIATE FOR SCHOOL AGED GIRLS**

by

**TIFFANY F. DAVIS****December 2014****Advisor:** Dr. Shlomo Sawilowsky**Major:** Educational Evaluation and Research**Degree:** Master of Education

The Human Papilloma Virus also known as HPV is a sexually transmitted disease. This particular STD consists of genital warts and can lead to cervical cancer in women. A HPV vaccine, Gardasil has been developed to help prevent the transmission of this particular STD. The topic of this paper is to discuss whether the HPV vaccine should be required to administer among female girls and adolescents. Despite the fact that the HPV vaccine is a preventative method for contracting HPV, many parents are not eager to accept this as a required vaccine to be administered to their daughter. One of the major reasons is due to lack of education about both HPV and the HPV vaccine. A study is performed to determine if parents are open to their child receiving the HPV vaccine and to test their knowledge of HPV and the HPV vaccine. The study concludes that parents do not have enough knowledge of HPV and the HPV vaccine to agree to the mandates that are being implemented throughout the United States to require female students to take the vaccine.

### **AUTOBIOGRAPHICAL STATEMENT**

Tiffany F. Davis was born in Detroit, Michigan on March 1, 1977 to Edward and Gladys Davis. She is the 5th of the six children. She enjoys running, reading and blogging,

Tiffany went on to Florida A&M University and earned a degree in Elementary Education in 2000. Soon after, she began teaching for the Detroit Public School system. A position she held for 12 years. As a teacher, she was very active in the uplifting of her school and community. She was a cheerleading coach, afterschool tutor, Response to Intervention chair, parental involvement faculty member, and data team chair. As the faculty member of the parental involvement association, Tiffany helped parents learn to use technology, train in interview skills, and appropriate work attire. She created a job station in the Parent Lab that held current positions available through Work First. Also, as the Data Team chair, she guided the staff in understanding the direction of the new and ever changing guidelines of showing student growth and development. In this position, she trained the staff how to display it to provide a meaningful way for students to become responsible for their own learning, even in Kindergarten. She was accepted in the Master's Program of Educational Evaluation and Research in 2008.

She has relocated to New York, New York to continue her career as a Kindergarten teacher. She is currently taking a class to become certified in Early Childhood to become a Preschool Director. Upon the completion of her Master's Degree, Tiffany would like to eventually work and retire from the Department of Education in Washington, D.C.