Maternal Acceptance, Attitude and Knowledge on Human Papilloma Virus Vaccination for Their Daughters

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Objective: *To compare the basic knowledge scores, attitudes and acceptability to HPV immunization before and after acknowledge about HPV, cervical cancer and vaccine to study group.*
Material and Method: *An anonymous survey was applied to women attending the outpatient clinic, Thammasat University Hospital from April 2010 to October 2010. Basic knowledge about cervical cancer, HPV, HPV vaccine, attitudes and acceptability to HPV immunization were collected via a self administered questionnaire.*
Results: *A total of 173 mothers completed the survey, responses rate of 86.5% (173/200). There is no difference in characteristic and lifestyles of the responders. The basic knowledge scores was higher in the subjects who had higher education level and regular cervical screening history. Most of subjects (> 85%) recognized that HPV is associated with cervical cancer but more than half of them confused about route of transmission. Basic knowledge scores is increased in all acceptability group (strongly agree to strongly disagree) after be informed about HPV and vaccine was observed. Most subjects (78.6%) agree to their daughters' vaccination indicating the high vaccine acceptances. The leading factors to maternal acceptances were free vaccination, negative attitudes such as sexual behavior of daughters and positive attitudes such as vaccine efficacy.*
Discussion: *HPV vaccine acceptance seems to be depended on cost and efficacy than maternal knowledge. The vaccine is not widely used. The cost-effectiveness analysis should be provided by government. Education and communication in public media are aimed for increasing coverage of vaccination in the future.*
Conclusion: *Maternal acceptances of vaccine depend on high efficacy and low cost.*

Keywords: *HPV vaccine, Maternal acceptance, Attitude and knowledge*

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Cervical cancer remains the leading cause of deaths in the developing countries. New cases of cervical cancer occur worldwide each year 493,000 women and in around 230,000 of these cases expired[1]. Nearly 75% of those deaths occur in developing countries where cervical cancer screening programs are either unavailable or ineffective[2]. In Thailand, cervical cancer is the most common cancer of woman. There were about 6,000-7,000 incident cases of cervical cancer per year and the government expended approximately 350 million baht each year for proper treatment of diseases and their consequences[3]. Virtually, all cervical cancers are causally related to infections by HPV. Cervical cancer incidence in Thailand was at 19.5 per 100,000 is more than 8 times higher than the US[4,5].

Human papillomavirus (HPV), the primary cause of cervical cancer, is the most common sexually transmitted infection. Over 40 types of HPV infect the genital epithelium and it is now widely accepted that cervical infections by approximately 15 carcinogenic types cause virtually all cervical cancer worldwide. Approximately 70% of cervical cancer cases are caused by HPV types 16 or 18. HPV vaccination was introduced in many countries following its approval by the US Food and Drug Administration (FDA) in June 2006. This vaccine is intended for girls aged 9-26[6]. The vaccine is estimated to decrease cancer morbidity and

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mortality by more than 60%. HPV vaccination of 12-year old girls is expected to lower their risk of contracting cervical cancer by 61.8%[7]. Because HPV vaccines are recommended to girls as primary targets. To understanding of the parental acceptability of HPV vaccination is should be consider by government for national vaccination program implement. In Thailand, parents had a low level of knowledge about HPV and cervical cancer. Pre-adolescents are the main target group. According to the fact that vaccine administering prior to sexual initiation have the best prophylactic effect[8]. School vaccination programs would be feasible. In the UK, acceptability by the public of routine vaccination against a sexually transmitted infection (STI) is still uncertain and parental consent for vaccination would be necessary. They expressed concerns that vaccines against sexually transmitted infections like HPV could encourage early sexual debut[9] and promote increased sexual risk behavior[10].

A population-based survey was conducted in eight secondary schools in Manchester UK with socially and ethnically mixed populations to evaluate parental consent and potential HPV vaccine acceptability. The present study showed the HPV vaccine acceptability of 80% if parents perceived in its safety and effectiveness. Nevertheless, most parents required knowledge about HPV and some were worried about precipitating sexual activities after vaccination[11]. In Italy, the present study of knowledge about HPV and HPV vaccination in Italian adolescent girl mothers showing only 54%. However above 80% were willing to immunize their daughters. An acceptance of HPV immunization from the present study was high and not associated with knowledge of HPV[12].

In Netherlands, HPV vaccine acceptance seems to be dependent on vaccine acceptance in general, even more depend on knowledge of HPV which variables may influence their decision[13]. HPV vaccinations were accepted by 88% of the parents but less than a third of all parents had heard of HPV. Knowledge of HPV and cervical cancer, religion, age, education and marital status did not correlate with HPV vaccine acceptance.

In addition surveys of HPV vaccine acceptance had been conduct in many developing countries. Such as Johannesburg in South Africa, the study assessed knowledge, maternal-child communication about sex and STDs, willingness to vaccinate child. The results indicated that women in developing countries needed more access to screening and education about HPV and cervical cancer prevention[14]. In Mysore India, the present study investigated attitudes toward HPV vaccination among parents of adolescent girls. Parents of adolescent girls were stratified by sex, religion and region to explore attitudes about cervical cancer and HPV vaccination. The present study established that parents accepted an HPV vaccine even lacking of HPV and cervical cancer knowledge[15]. The positive attitudes of parents pointing out toward the government universal immunization program in general, rather than to the HPV vaccine in particular and necessitate for additional education and health promotion regarding HPV and cervical cancer prevention in India.

In Thailand, quadrivalent vaccine and bivalent vaccine were approved for use in 2007.They were offered in girls 9-11 years old and women aged less than 26 years old who have not yet become sexually active. According to the implementation of HPV vaccines gives rise to problems such as a lack of confidence in their efficacy, the fear of side effects. Another problem is purchase costs that relatively high which is 6,000-7,000 THB or approximately 200-230 USD per course that parents were charged to vaccination their daughters. To achieve the greatest public health benefit girls and/or boys should be vaccinated prior to the onset of sexual activity. All pre-teenage children are the proposed target population of national policy. Meanwhile parental consents must be required. In Pathumthani, an suburban area of Thailand, the authors surveyed adolescent girls' mothers knowledge about HPV, vaccine and acceptability of vaccinated their daughters. As the present study, the authors investigate of a basic knowledge, attitudes and acceptability to the HPV immunization. The present study may help tailoring additional education, health promotion regarding HPV and cervical cancer and immunization strategies at the local level. As regards an initiative issue provide to the government for intend universal immunization program in general, rather than to the HPV vaccine in particular.

Material and Method

Study design

This descriptive, correlational, cross-sectional study examined the basic knowledge about HPV, cervical cancer, HPV vaccine attitudes and acceptability to HPV immunization of mothers of daughters 18 years and younger. In addition, demographic, descriptive variables characteristics, lifestyle, cervical cancer and health status screening behavior were encompassed in the present study for more understanding of

mothers' intention to vaccinate their daughters. The present study, which was approved by the IRB (Institute Review Board) of Thammasat University, Pathumthani, Thailand, was conducted in Between 1st April 2010 to 31st October 2010 and informed consent was obtained from all of the participants before study entry.

Questionnaire

A self-administered, anonymous questionnaire, which was created by gynecologic oncologist. The pilot-tested group are 20 of the healthcare providers of Obstetrics and Gynecology Clinic in Thammasat University Hospital to ensure clarity and ease of administration. Content validity was checked by specialist in gynecologic-oncology and Cronbach's Alpha was used to determine reliability. It included 4 sections assessing: 1) the general demographic characteristics of the enrolled mothers, 2) lifestyle of the enrolled mothers such as smoking alcohol drinking and past history of Pap smear tests, 3) basic knowledge compare to knowledge after acknowledge about HPV, HPV disease and cervical cancer and vaccine, 4) acceptability and attitudes toward HPV vaccine using a 5-point Likert Scale ranging from (1) strongly disagree to (5) strongly agree.

Study population

The research was based on a convenience sample of 173 mothers of daughters 18 years and younger. The data were collected via questionnaires during outpatient department visiting sessions for women in Pathumthani, a suburban district. Questionnaires and explanatory handouts were distributed to 200 mothers; however, only 173 (86.5%) fully completed questionnaires were returned.

Statistical analysis

Descriptive statistics were generated means and standard deviations of the responses were calculated. T-tests were used to determine the relationship between demographic characteristics and the χ^2 tests for independent samples were used to compare the categorical and continuous variables between the groups of characteristics and lifestyle, attitudes, knowledge and acceptability, the unpaired t-tests or numeric independent samples data. All of the analyses were two tailed and p-values of 0.05 or less were considered significant. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated to measure the association. All of the analyses were made using SPSS Version 14.0.

Results

Of the 200 enrolled mothers of daughters 18 years and younger, 173 returned surveys, response rate of 86.5%. Table 1 shows the general characteristics and demographic data, the mean age of mothers was 35.5 years and of all 173 mothers 60 (34%) had hometown in Suburb area and more than half (66.5%) lived in suburb area. Educational attainment varied widely with 40% had additional education after high school in university or college. About half (53.3%) referred household income below 8,000 USD while median household income in this area has been estimated at 10,300 USD.119 (68.8%) had only 1 daughter and three quarter (74%) had daughter in age group of less than 9 years old.

Table 2 reveals the lifestyles of the mothers that shows their health concerning. 171 (99.5%) cases were group of not regular or never smoking. Three

Table 1. Demographic profile of respondents (n = 173)

Characteristics	Number	Percent (%)
Maternal age		
< 26	13	7.5
26-30	33	19.1
31-35	51	29.5
More than 35	76	44.0
Homestead		
Bangkok	17	9.8
Suburb	115	66.5
Middle part	36	20.8
North-east part	4	2.3
South part	1	0.6
Highest level of education		
Primary	20	11.5
Secondary	65	37.6
Trade school	18	10.4
University/college	70	40.5
Household income per year		
Less than $4,000	30	17.3
$4,000-$8,000	66	38.2
$8,000-$12,000	31	17.9
$12,000-$16,000	20	11.6
More than $16,000	26	15.0
No. of daughters		
1	119	68.8
2	47	27.2
3 or more	7	4.1
Age of daughter		
< 9	128	74.0
9-11	42	24.3
11-18	3	1.7

quarter (75.7%) of them concern about their health and had yearly check up,26 cases (15%) had never been check up. About a quarter never had Pap smear, at the same time as more than half of cases (53.2%) had Pap smear within 1-2 years.

Table 3 shows maternal background knowledge 76% have ever heard about HPV and HPV vaccine but only 38% desired for brief information about HPV and HPV vaccine. Meanwhile only about half of them (45%) had ever been informed about HPV and HPV vaccine by physician.

Table 4 compares mother's scoring of knowledge before and after being informed about HPV and vaccine via the explanatory handouts. Most of all cases (85.5-90.8%) recognized that HPV is associated with cervical cancer but more than half of responders confused about route of transmission, even after being informed. Only about half (42-58%) of responders known that it is better to vaccinate girls before they become sexually active and one-third (23-38%) knew about a recommended age for vaccination. The mean of knowledge scores were increasing depending to higher level of education and in women who attended to regular cervical cancer screening program every 1-2 years.

Fig. 1 shows slightly increasing of knowledge scores in every level of maternal acceptability (strongly agree to strongly disagree) after being informed about HPV and vaccine.

Table 5 shows maternal positive and negative attitude on HPV vaccination, more than three-quarter (72%) believed they have insufficient information about

Table 2. Lifestyles related to their health concerning

Lifestyle	Number	Percent
Alcohol drinking		
Weekly	1	0.6
Monthly	1	0.6
Not regular	73	42.2
Never	98	56.6
Smoking		
10-20/day	1	0.6
< 10/day	0	0
Not regular	2	1.2
Never	170	98.3
Health check		
Never	26	15.0
> 1-2 yrs	131	75.7
> 2-5 yrs	9	5.2
> 5 yrs	7	4.0
Pap smear (female)		
Never	42	24.3
> 1-2 yrs	92	53.2
> 2-5 yrs	26	15
> 5 yrs	13	7.5

Table 3. Maternal background knowledge about HPV and HPV vaccine

Background Knowledge about HPV and HPV vaccine	Yes (%)	No (%)
Had ever heard about HPV and HPV vaccine	132 (76.3)	41 (23.7)
Had ever requested for an information about HPV and HPV vaccine	66 (38.2)	107 (61.8)
Had ever been informed an information about HPV and HPV vaccine by physician	77 (44.5)	96 (55.5)

Table 4. Maternal knowledge scores before and after being informed about HPV and HPV vaccine

Knowledge of HPV and HPV vaccine	Pre test		Post test	
	Correct	Incorrect	Correct	Incorrect
Knew that HPV can be transmitted sexually	23 (13.3%)	150 (86.7%)	36 (20.8%)	137 (79%)
Knew that HPV is a major cause of cervical cancer	148 (85.5%)	25 (14.4%)	157 (91%)	16 (9.2%)
Believed that smoking is related cause of cervical cancer	61 (35.3%)	112 (64.7%)	19 (11.0%)	154 (89%)
Believed that multiple sexual partners is related cause of cervical cancer	93 (53.8)	80 (46.2%)	101 (58.4)	72 (41.6%)
Knew that it is better to vaccinate girls before they become sexually active	72 (41.6%)	101 (58.4%)	88 (50.9%)	85 (49.1%)
Knew that at what age should be recommended for vaccination	41 (23.7%)	132 (76.3%)	65 (37.6%)	108 (62%)

HPV. About half of responders (46%) were unsured that vaccination will cause daughters to behave lasciviously, in the meantime about three-quarter (68%) didn't believe that awareness of other STDs will decrease after HPV vaccination. Above 70% believed that routine Pap smear program could not be eliminated by HPV vaccination and only 8 (4.7%) agree that annual Pap smear is not necessary for women who have been vaccinated. Almost all (95%) show positive attitude on HPV vaccination with strongly agree or agree that vaccine are available to prevent cervical cancer.

Table 6 shows maternal acceptability to vaccinate their daughters. There are 5 (2.9%) cases didn't accept to vaccinate their daughters and 136 (78.6%) cases accepted to vaccinate (strongly agree and agree) their daughters with HPV vaccine, this also indicated the same among of responders who agree to vaccinate every child as universal. About 122 (70.6%) were considering to vaccinate themselves. If government offer HPV vaccination for free, about half of responders (49%) will vaccinated their daughters and even though HPV vaccine costs 200-230 USD, more than half of responders (60.7%) are willing to vaccinate their daughters.

In accordance with acceptability to HPV vaccine and influencing factors, 75 (43.4%) were seriously concerning of vaccine efficacy. Vaccine safety and cost of vaccine were a second and third upcoming influencing factors showing 46 (26.6%) and 36 (20.8%) respectively. Evidence of serious side effect and proper indication as a target group for vaccination are not found to have an effect on vaccine acceptations as shows in Fig. 2.

Table 7 shows statistically significant associations among the independent variables according to maternal acceptances were found in influence factors such as if government offers HPV vaccination as a national policy for free in target group, in negative attitude variables such as worried about sexual behavior of daughters and positive attitudes such as confidence of vaccine efficacy for prevent cervical cancer.

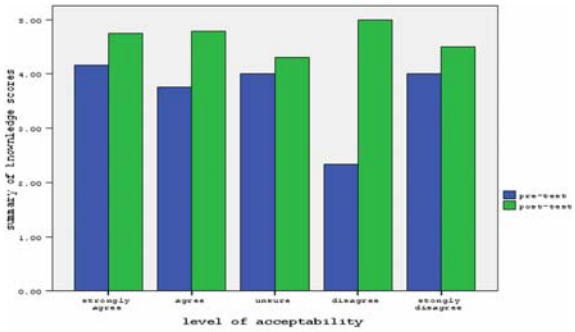

Fig. 1 Knowledge before and after informed according to acceptibility

Discussion

For the past 40 years, cervical cancer screening program was covered 20-25% of population. Even though trends in incidence of cervical cancer from 1,990-2,000 was steady but annually increasing in incidence was estimated from 6,243 cases in 2002 to over 8,000 in 2008. To encourage screening Pap smear in high risk population simultaneously with promote HPV vaccination to girls before they become sexually active may reduces incidence rate of cervical cancer. According previous study estimated to decrease cancer

Table 5. Maternal positive and negative attitude on HPV vaccination

Question	Strongly agree n (%)	Agree n (%)	Unsure n (%)	Disagree n (%)	Strongly disagree n (%)
You say you have insufficient information about HPV	38 (22.0)	87 (50.3)	36 (20.8)	7 (4.0)	3 (1.7)
It is preferable to vaccinated girl who out of recommended age range (9-26 yrs old)	29 (16.8)	77 (44.5)	43 (24.9)	15 (8.7)	6 (3.5)
HPV vaccination will cause my daughter to behave lasciviously	4 (2.3)	25 (14.5)	77 (46.5)	51 (29.5)	14 (8.1)
HPV vaccination decrease awareness of other STDs	5 (2.9)	11 (6.4)	36 (20.8)	56 (32.4)	63 (36.4)
It is the similar effectiveness of vaccinated in sexually active girl	20 (11.6)	73 (42.2)	60 (34.7)	16 (9.2)	2 (1.2)
HPV vaccine had benefit on treatment of an abnormal Pap smear	14 (8.1)	48 (27.7)	66 (38.2)	32 (18.5)	11 (6.4)
HPV vaccination could eliminate the need for routine Pap smear program	3 (1.7)	11 (6.4)	31 (17.9)	91 (52.6)	35 (20.2)
Women who have vaccinated have to Pap smear annually	7 (4.0)	57 (32.9)	99 (57.2)	6 (3.5)	2 (1.2)
HPV vaccine are available to prevent cervical cancer	97 (56.1)	67 (38.7)	6 (3.5)	1 (0.6)	0

Table 6. Maternal acceptability about HPV vaccination

Question	Strongly agree n (%)	Agree n (%)	Unsure n (%)	Disagree n (%)	Strongly disagree n (%)
Do you agree if ministry of public health is going to offer HPV vaccine for free to 9-11 years old girls ?	84 (48.6)	68 (39.3)	16 (9.2)	3 (1.7)	0
Do you agree with the policy of giving vaccinate to every children	67 (38.7)	83 (48)	18 (10.4)	2 (1.2)	1 (0.6)
You consider to vaccinatedyourself	38 (22.0)	84 (48.6)	41 (23.7)	7 (4.0)	1 (0.6)
You accept the active HPV vaccination to your daughter	48 (27.7)	88 (50.9)	30 (17.3)	3 (1.7)	2 (1.2)
If your daughter is not in the target group you still want to pay for vaccinate her	31 (17.9)	44 (25.4)	74 (42.8)	17 (9.8)	5 (2.9)
If government offer to HPV vaccination for free, I will vaccinate my daughter	36 (20.8)	50 (28.9)	55 (31.8)	25 (14.5)	6 (3.5)
Now HPV vaccine costs 200-230 USD per course, however I will vaccinate my daughter	39 (22.5)	66 (38.2)	57 (32.9)	7 (4.0)	3 (1.7)

Table 7. Findings of t-tests on differences between mothers according to influence factor, negative attitude, positive attitude and mean scores of knowledge in acceptability to vaccinated their daughters

Variables	Accept n (SD)	Not Accept n (SD)	p-value
Influence factor :If government offer to HPV vaccination for free, I will vaccinate my daughter	4.52 (0.68)	2.02 (1.34)	0.000*
Negative attitudes such as HPV vaccination will cause my daughter to behave lasciviously	3.86 (1.45)	4.80 (1.45)	0.001*
Positive attitudes such as HPV vaccine are available to prevent cervical cancer	4.18 (2.74)	2.74 (1.93)	0.000*
Mean scores before given HPV and vaccine information	3.86 (1.55)	3.78 (1.48)	0.774
Mean score after given HPV and vaccine information	4.82 (2.08)	4.20 (1.64)	0.064

Data were shown as mean (SD), analyzed with Independent t-test

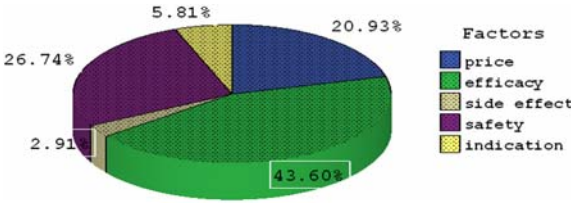

Fig. 2 Factors influencing acceptabillity to vaccine

morbidity and mortality by more than 60%, expected to lower their risk of contracting cervical cancer by 61.8%. To vaccinated a girl, is important that the authors requires consents with her parental acceptances as well. However, HPV is a major cause cervical cancer was new information to general population then the introduction of the vaccine without sufficient education or information was a vast confront[16]. The basic knowledge about the association between HPV and cervical cancer need to be educated. There have been no population prevalence data for HPV infection in Thailand to assure public of HPV infection. Only some studies have also shown that the HPV prevalence among women in developing countries is relatively higher than in developed regions[17]. The fact about the prevalence of HPV infection of women in Pathumthani, Thailand where the present study was conducted, Suwannarurk et al (2009) found 6.1%, 11.8%, prevalence for HPV types 16, 18 while 25% were infected with multiple HPV types[18]. This could demonstrate the approximately risk of HPV related disease in this same area. The evaluation about the basic knowledge, attitude of HPV by Lenselink et al found that Netherland parents who are higher education, especially who were employed in medical professions have statistically significant greater knowledge of the HPV infection and vaccine[7]. Since no studies in Thailand have ever

broadly evaluated about the basic knowledge, attitudes of HPV and cervical cancer in parents or investigating positive or negative responses before and after being informed about HPV and HPV vaccine. Regardless of the fact that the responders predominantly had experience with the cervical screening program, only about 24% of the parents had never heard of HPV. The authors' study establish that basic knowledge scores are higher in higher education women and women who attended to regular cervical cancer screening program every 1-2 year, that indicate an awareness of cervical cancer. An increasing of maternal basic knowledge scores in every level of acceptability (strongly agree to strongly disagree) after be informed about HPV and vaccine was observed. Dempsey et al (2006) showed that a brief educational intervention of the parents opposed to or undecided about the HPV vaccine significantly improved the acceptance of an HPV vaccine from 55 to 75%. But no significant difference of the mean parental vaccine acceptability scale score between the two groups, suggesting that receipt of the HPV information sheet did not substantially alter parental acceptability of HPV vaccines[22].

According to vaccine acceptance, the research found that 78.6% of study group demonstrated a strongly agree to agree that indicate relatively high in vaccine acceptances, Natan et al also found highly intentions (about 63%) in Israeli mothers[20], where as Chan et al found such an intention among only 32% of Chinese mothers[21]. The difference could be explained by examined the factors influencing of maternal intention to vaccinate their daughters against the HPV infection. Exploration of the factors influencing in mothers who have highly intentions to vaccinate their daughters in the presented study found that the most concern problem (44%) is about vaccine efficacy and 26.1% and 20% are about the vaccine's safety and cost of vaccination, respectively. Marshall et al found that parents expressed concern about the vaccine's safety and preferred to receive additional knowledge of the vaccine before consenting to its administration[19]. The riot of factors influencing maternal intentions to vaccine may provoked by a current established scientific data about vaccine efficacy and its safety, however up to now a long-term side effects is unknown, physicians and parents should be concerned. The present study shows statistically significant associations of maternal acceptances to vaccinated their daughters with influence factors such as implementation HPV vaccine as a national policy, negative attitudes about sexual behavior of daughters and positive attitudes such as confidence of vaccine efficacy for prevent cervical cancer. Lenselink et al also found that Netherland parents expressed positive intention to vaccinate their children if it was recommended by Ministry of Public Health[7].

Conclusion

Despite the fact that limitation of the present study is a non-randomized, hospital-based subjects. There is a high probability of selection bias. In addition, the present study was limited to women in Pathumthani, a suburban district central of Thailand, restricting the implications of the research results for other parts of Thailand. A lack of knowledge of HPV infections, cervical cancer and HPV vaccination was established but there are remain an outstanding in highly acceptability rate compared with results of other studies. Regarding to the presented study, HPV vaccine acceptance seems to be dependent on vaccine acceptance in general or other influence factors such as cost or vaccine efficacy more than maternal knowledge of HPV. In Thailand, used of the vaccine was restricted and not enclosed population, the cost-effectiveness analysis should be provided by government. Visions into further study together with promote supervisory educational and communication in public media is aimed for appropriated vaccination in the future.

Potential conflicts of interest

None.

References

1. Bornstein J, Tuma R, Zarfati D, Ophir E. Vaccination against cervical cancer and diseases caused by Human Papillomavirus. Harefuah 2007; 146: 764-9.
2. Gakidou E, Nordhagen S, Obermeyer Z. Coverage of cervical cancer screening in 57 countries: low average levels and large inequalities. PLoS Med 2008; 5: e132.
3. Ferlay J, Bray F, Pissani P, Parkin DM. GLOBOCAN 2002 cancer incidence. Mortality and prevalence worldwide. IARC Cancer Base No. 5 version 2.0. Lyon: IARC Press; 2004.
4. Saslow D, Runowicz CD, Solomon D, Moscicki AB, Smith RA, Eyre HJ, et al. American Cancer Society guideline for the early detection of cervical neoplasia and cancer. CA Cancer J Clin 2002; 52: 342-62.
5. International Agency for Research on Cancer (IARC). Handbooks of cancer prevention: cervix

cancer screening. Vol. 10. Lyon, France: IARC; 2005.
6. Farrell RM, Rome ES. Adolescents' access and consent to the human papillomavirus vaccine: a critical aspect for immunization success. Pediatrics 2007; 120: 434-7.
7. Lenselink CH, Gerrits MM, Melchers WJ, Massuger LF, van Hamont D, Bekkers RL. Parental acceptance of Human Papillomavirus vaccines. Eur J Obstet Gynecol Reprod Biol 2008; 137: 103-7.
8. Stanley M, Lowy DR, Frazer I. Chapter 12: Prophylactic HPV vaccines: underlying mechanisms. Vaccine 2006; 24 (Suppl 3): S3/106-13.
9. Woodhall SC, Lehtinen M, Verho T, Huhtala H, Hokkanen M, Kosunen E. Anticipated acceptance of HPV vaccination at the baseline of implementation: a survey of parental and adolescent knowledge and attitudes in Finland. J Adolesc Health 2007; 40: 466-9.
10. Vamos CA, McDermott RJ, Daley EM. The HPV vaccine: framing the arguments FOR and AGAINST mandatory vaccination of all middle school girls. J Sch Health 2008; 78: 302-9.
11. Brabin L, Roberts SA, Farzaneh F, Kitchener HC. Future acceptance of adolescent human papillomavirus vaccination: a survey of parental attitudes. Vaccine 2006; 24: 3087-94.
12. Tozzi AE, Rava L, Stat D, Pandolfi E, Marino MG, Ugazio AG. Attitudes towards HPV immunization of Italian mothers of adolescent girls and potential role of health professionals in the immunization program. Vaccine 2009; 27: 2625-9.
13. Lenselink CH, Gerrits MM, Melchers WJ, Massuger LF, van Hamont D, Bekkers RL. Parental acceptance of Human Papillomavirus vaccines. Eur J Obstet Gynecol Reprod Biol 2008; 137: 103-7.
14. Francis SA, Nelson J, Liverpool J, Soogun S, Mofammere N, Thorpe RJ Jr. Examining attitudes and knowledge about HPV and cervical cancer risk among female clinic attendees in Johannesburg, South Africa. Vaccine 2010; 28: 8026-32.
15. Madhivanan P, Krupp K, Yashodha MN, Marlow L, Klausner JD, Reingold AL. Attitudes toward HPV vaccination among parents of adolescent girls in Mysore, India. Vaccine 2009; 27: 5203-8.
16. Wong LP. HPV information needs, educational messages and channel of delivery preferences: views from developing country with multiethnic populations. Vaccine 2009; 27: 1410-5.
17. Clifford GM, Gallus S, Herrero R, Munoz N, Snijders PJ, Vaccarella S, et al. Worldwide distribution of human papillomavirus types in cytologically normal women in the International Agency for Research on Cancer HPV prevalence surveys: a pooled analysis. Lancet 2005; 366: 991-8.
18. Suwannarurk K, Tapanadechopol P, Pattaraarchachai J, Bhamarapravati S. Hospital-based prevalence and sensitivity of high-risk human papillomavirus in Thai urban population. Cancer Epidemiol 2009; 33: 56-60.
19. Marshall H, Ryan P, Roberton D, Baghurst P. A cross-sectional survey to assess community attitudes to introduction of Human papillomavirus vaccine. Aust N Z J Public Health 2007; 31: 235-42.
20. Ben Natan M, Aharon O, Palickshvili S, Gurman V. Attitude of Israeli mothers with vaccination of their daughters against human papilloma virus. J Pediatr Nurs 2011; 26: 70-7.
21. Lee PW, Kwan TT, Tam KF, Chan KK, Young PM, Lo SS, et al. Beliefs about cervical cancer and human papillomavirus (HPV) and acceptability of HPV vaccination among Chinese women in Hong Kong. Prev Med 2007; 45: 130-4.
22. Dempsey AF, Zimet GD, Davis RL, Koutsky L. Factors that are associated with parental acceptance of human papillomavirus vaccines: a randomized intervention study of written information about HPV. Pediatrics 2006; 117: 1486-93.

การยอมรับทัศนคติและความรู้ของมารดาต่อการฉีดวัคซีนป้องกันการติดเชื้อไวรัสฮิวแมนแปบปิโลมาให้แก่บุตรสาว

กริชา ไม้เรียง, คมสันติ์ สุวรรณฤกษ์, ยุทธเดช ทวีกุล, เย็นฤดี ภูมิถาวร

การศึกษานี้มีจุดมุ่งหมายที่จะแสดงถึงความรู้ที่เกี่ยวข้องกับเชื้อไวรัสฮิวแมนแปบปิโลมา การยอมรับตลอดจนทัศนคติของมารดาต่อการฉีดวัคซีนนี้ให้แก่บุตรสาวของตน โดยได้ทำการศึกษาในกลุ่มประชากรตัวอย่าง กล่าวคือ สตรีที่มารับการตรวจรักษาที่แผนกผู้ป่วยนอก โรงพยาบาลธรรมศาสตร์ ตั้งแต่เมษายนจนถึงตุลาคม พ.ศ. 2553 มีการประเมินโดยใช้แบบสอบถามที่เกี่ยวข้องกับความรู้เบื้องต้นที่เกี่ยวข้องกับเชื้อไวรัสฮิวแมนแปบปิโลมา อีกทั้งยังมีการประเมินการยอมรับ ตลอดจนทัศนคติของมารดาต่อการฉีดวัคซีนป้องกันการติดเชื้อไวรัสฮิวแมนแปบปิโลมาให้แก่บุตรสาวของตน พบว่าจากมารดาที่เข้าร่วมการศึกษาทั้งหมด 173 คน ไม่พบมีความแตกต่างในแง่ของวิถีชีวิตและลักษณะพื้นฐานโดยรวม แต่พบว่าในมารดาผู้ที่มีระดับการศึกษาที่สูงขึ้น และการตรวจคัดกรองมะเร็งปากมดลูกที่สม่ำเสมอ จะมีความรู้พื้นฐานที่เกี่ยวข้องกับเชื้อไวรัสฮิวแมนแปบปิโลมาที่สูงกว่า และเป็นที่น่าสนใจว่ามากกว่าร้อยละ 85 ทราบว่าการติดเชื้อไวรัสฮิวแมนแปบปิโลมา จะมีความเกี่ยวข้องกับมะเร็งปากมดลูกแต่มากกว่าครึ่งหนึ่งยังมีความสับสนเกี่ยวกับวิธีการติดต่อของเชื้อนี้พบว่า มีมารดาจำนวนมากกว่า 78% ที่ให้การยอมรับการฉีดวัคซีนป้องกันการติดเชื้อไวรัสฮิวแมนแปบปิโลมาให้แก่บุตรสาวของตน มารดาในกลุ่มนี้จะมีความรู้พื้นฐานจะเพิ่มขึ้นหลังจากที่มีการให้ความรู้เกี่ยวกับการติดเชื้อ และจากการศึกษายังพบปัจจัยที่นำไปสู่การยอมรับของมารดาต่อการฉีดวัคซีนหลายปัจจัย เช่น ค่าใช้จ่ายที่รัฐบาล จะช่วยเหลือในการฉีดวัคซีน และทัศนคติในเชิงลบต่อการรับวัคซีน เช่นกังวลว่าลูกสาวจะมีพฤติกรรมทางเพศ ในทางที่เสี่ยงเพิ่มขึ้นหลังจากรับวัคซีน อีกทั้งยังมีมารดาที่ยังมีความสงสัยในประสิทธิภาพของวัคซีน ในการป้องกันมะเร็งปากมดลูกโดยสรุปการยอมรับน่าจะขึ้นอยู่กับค่าใช้จ่าย และประสิทธิภาพของวัคซีนมากกว่าความรู้ของมารดาเกี่ยวกับวัคซีน ในอนาคตควรสนับสนุนให้มีการศึกษาวิเคราะห์เกี่ยวกับต้นทุน และประสิทธิผลจากภาครัฐบาล และมีการสื่อสารต่อสาธารณะให้มีความครอบคลุม