

Improving Knowledge, Beliefs and Intent to Vaccinate Against Human Papillomavirus Among Parents of School Going Girls in Yerevan, Armenia: A Multimedia Health Education Intervention

Master of Public Health Integrating Experience Project

Professional Publication Framework

by

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Table of contents

Acknowledgement	ii
Executive summary	v
1. Introduction	1
1.1 Background on human papillomavirus	1
1.2 Global situation.....	2
1.3 Situation in Armenia.....	3
1.4 Factors of decision making	4
1.5 Rationale of the project.....	6
1.6 Aim and objectives of the study.....	8
1.7 Study hypothesis	8
2. Methods and materials	9
2.1 Conceptual framework.....	9
2.2 Study design and setting	10
2.3 Target population	11
2.4 Sampling	11
2.5 Intervention.....	12
2.6 Variables and measures.....	12
2.7 Sample size calculation.....	13
2.8 Instrument	14
2.9 Data collection and entry	15
2.10 Data analysis	15
2.11 Ethical consideration.....	16
3. Results	16
3.1 Demographic information of the participants	16
3.2 Results from pre-test.....	17
3.3 Results from post-test	18
3.4 Quality of intervention and results from open-ended question.....	18
4. Discussion	19
4.1 Main findings	19
4.2 Strengths and limitations.....	21

4.3 Recommendations.....	22
4.4 Conclusion	22
References.....	24
Tables	32
Table 1. Demographic information of the participants.....	32
Table 2. Pre-test and post-test scores of the participants.....	34
Table 3. Pre-test and post-test knowledge domain	35
Table 4. Pre-test and post-test belief domain.....	36
Table 5. Pre-test and post-test intent to vaccinate.....	38
Table 6. Change in intent to vaccinate from pre-test to post-test	39
Table 7. Correlation between the change in intent to vaccinate and change in scores.....	40
Table 8. Quality of intervention.....	41
Table 9. Will parents vaccinate their daughter if their healthcare provider recommends HPV vaccination?	42
Appendix section	43
Appendix A. Global statistics on HPV	43
Appendix B. Factors leading to decision-making.....	44
Appendix C. Childhood vaccination rates in Armenia	45
Appendix D. Conceptual framework	46
Appendix E. Study locations (schools).....	47
Appendix F. Invitation to participate (English version)	48
Appendix G. Invitation to participate (Armenian version).....	50
Appendix H. Intervention (Synopsis of the short film)	52
Appendix I. Intervention (In-video presentation script)	53
Appendix J. Survey instrument (English version)	56
Appendix K. Survey instrument (Armenian version).....	66
Appendix L. Interviewer manual	79
Appendix M. Consent form (English version).....	82
Appendix N. Consent form (Armenian version).....	84

Executive summary

Introduction: Human Papillomavirus (HPV) is one of the most common sexually transmitted diseases among the human population and is emerging as one of the noticeable global health risks. In developed countries, women are vaccinated against HPV and are regularly screened for cervical dysplasia, thus, allowing early detection of HPV infection and leading to the prevention of 80% of cervical cancers. Around 250 new cases of cervical cancer are diagnosed every year in Armenia, all linked with HPV infection. In 2018, cervical cancer was the second most common cancer among women of reproductive age, and the seventh leading cause of morbidity of any cancer among the female population in Armenia. Though the HPV vaccine has been available to the public since 2017 in Armenia, the coverage was around 10% in 2019. Lack of knowledge about the cervical cancer, lack of awareness about the HPV vaccine, and speculations surrounding the side-effects of the vaccine could be the reasons for the observed low coverage in the country.

Aim: This project aims to increase knowledge and belief about HPV among parents of school-going girls and to increase the intention to vaccinate their daughter by demonstrating the advantages of vaccinating against HPV through a video intervention in Yerevan, Armenia.

Methods: The study follows a pre-experimental panel design with a pre- and a post-test measurement. Two primary schools were randomly selected and parents with a daughter not vaccinated against HPV, and aged between 9 and 14 studying in the school were invited to participate in the study. The intervention was a 10-minute short film in Armenian language which included an in-video presentation of current information on HPV and was screened to the parents at the school. The instrument was developed from existing validated questionnaires and

explored three main domains: knowledge (14 questions), belief (7 questions) and intent to vaccinate against HPV (2 questions).

Results: A total of 42 parents participated and the analysis was carried out with 39 eligible parents. All of the participants were mothers with a mean age of 38 years (SD= 5.90). The mean pre-test knowledge score was 4.51 (SD=2.92) and the mean pre-test belief score was 20.54 (SD= 3.79). The post-test knowledge score (M= 9.31; SD=3.15) and belief score (M= 23.56; SD=4.51) improved significantly from pre-test ($p<0.001$). The knowledge and belief scores of the participants on average improved by 4.80 (SD=2.92) and 3.03 (SD=4.58), i.e. by 106.4% and 14.8% respectively. Around one-third of the participants (34.2%) improved their intent to vaccinate their daughter against HPV from pre-test to post-test, while 60.5% did not improve and 5.2% of participants showed a negative change in their intention. There was no significant association found between change in knowledge score, belief score and intent to vaccinate.

Conclusion: A multimedia education intervention using a short film was well received by parents and proves to be an efficient tool to improve knowledge, belief on HPV and intent to vaccinate against HPV. Such a method of education could be developed regularly with updates and be disseminated among the general population by the stakeholders.

1. Introduction

1.1 Background on human papillomavirus

The Human Papillomavirus (HPV) is one of the most common sexually transmitted diseases (STD) among the human population and is emerging as one of the noticeable global health risks.^{1,2} It is found that any individual, either male or female, who is sexually active, will be infected by at least one of the strains of HPV in their lifetime.^{1,2} Over 100 types of the virus have been found among which at least 14 types are high risk and cancer-causing.^{1,2} Low-risk types of HPV do not cause cancerous lesions and cause only pre-cancerous lesions such as genital papilloma also known as genital warts in the genital area, and respiratory papillomatosis.¹⁻³ On the other hand, high-risk types of HPV are cancerous.¹⁻³ HPV is transmitted by sexual contact with an individual affected with the virus.¹⁻³ HPV is widely known to cause genital warts and cervical cancer, but the virus also affects other anatomical structures and causes cancer of anus, vagina, vulva, penis, and oropharynx.⁴ Out of the 100 identified types of HPV, types 16 and 18 are known to cause around 70% of all cervical cancer and pre-cancerous lesions.^{2,4} Most individuals infected with HPV do not exhibit any symptoms and do not require treatment, while infection by high-risk types of HPV demonstrates pathological changes in cellular and tissue structure, leading to tissue dysplasia and cancer.⁴⁻⁶

The World Health Organization (WHO) elucidates four types of cervical cancer control, primary prevention by vaccinating against HPV, secondary prevention by screening for cervical dysplasia by regular pap-smear tests and receiving treatment for pre-cancerous lesions, tertiary prevention by diagnosis and treatment of cancerous lesions and, finally, palliative care for advanced cases.² The intervention of this study complements the first type of cervical cancer control as elucidated by the WHO and the specific recommendation made by post-introduction evaluation of

quadrivalent Gardasil in Armenia.^{2,7} Vaccines against HPV have been developed and the United States Center for Disease Control and Prevention (US CDC) recommends vaccinations for boys and girls aged starting 11 years and up to the age of 26 years.¹ The HPV vaccine does cause side effects such as redness, swelling, nausea, headache and dizziness, which are typically expected to any vaccination.⁸

1.2 Global situation

Globally, millions of sexually active individuals are at risk of HPV infection and in the United States, around 80 million are estimated to be infected currently.¹ In 2018, an estimated 570,000 cases of cervical cancer were diagnosed in less developed regions and it was found to be the second most common cancer among women of reproductive age.¹ The same year, it was reported that around 311,000 women with cervical cancer died.¹ (see Appendix A)

Currently, three variants of HPV vaccines are in the market, namely, bivalent Cervarix, quadrivalent Gardasil and nonavalent Gardasil.^{3,9} In developed countries, females are vaccinated against HPV and are regularly screened for cervical dysplasia thus allowing early detection of HPV infection and leading to the prevention of 80% of cervical cancers.²

The global HPV vaccine coverage was around 10% in 2017.¹⁰ As of October 2018, 85 countries have introduced HPV vaccination program.¹⁰ In 2006, HPV vaccine was introduced in the United States (US) and the HPV infections saw a 64% reduction among teens in the country.¹ At the moment, almost a decade after the HPV vaccine had been introduced, the global coverage is not completely met and the demand is expected to increase owing to the introduction of cervical cancer prevention programs all over the globe.^{11,12} The Global Alliance for Vaccines and Immunization (GAVI) organization, a public-private global health partnership which collaborates with countries worldwide to improve access to vaccines, has helped many low-

income and lower-middle income countries to introduce HPV vaccination as a stand-alone project and into the national immunization program helping vaccination of 3.9 million girls against HPV.¹¹ Barriers in implementing HPV vaccination and maintaining higher coverage rates, such as cost of vaccines, insurance non-coverage, concerns over quality and need for vaccines, parental knowledge and vaccine acceptance have been found.¹³⁻¹⁶ Many countries suffer from a combination of the mentioned barriers and struggle in reducing cervical cancer rates in the region.¹³⁻¹⁶

1.3 Situation in Armenia

By 2019, around 250 new cases of cervical cancer are being diagnosed every year in Armenia (Personal communication with Dr. Gayane Sahakyan, National Immunization Program Manager, Ministry of Health of Republic of Armenia). In 2018, cervical cancer was the second most common cancer among women of reproductive age, i.e. 15 to 44 years, and the seventh leading cause of morbidity of any cancer among the female population in Armenia.¹⁷ In the same time period it was estimated that the incidences of cervical cancer in Armenia was around 8.4 per 100,000 women, second highest in the region, following 9.8 in Georgia.¹⁷

The importance of HPV vaccination has been realized by the government of Armenia which developed a policy recommending vaccination to girls aged 13 years old. Though the HPV vaccine has been available to the public since 2017, the coverage is around 10% in 2019. (Personal communication with Dr. Gayane Sahakyan) Though the HPV vaccination rate increased from 5% in 2018, the numbers are improving at a slow pace. (Personal communication with Dr. Gayane Sahakyan) One news article reported that 176 girls were vaccinated against HPV in January of 2018, but the news did not create enough motivation among parents to vaccinate their daughter.¹⁸ This low coverage can be attributed to low awareness about the

vaccine, low levels of knowledge about the seriousness of cervical cancer and speculations surrounding the harmful effects of the HPV vaccine.¹⁹ Cervical cancer has been identified as one of the leading causes of morbidity and mortality among women of reproductive age.¹⁰ Many countries have introduced HPV vaccination for both men and women, also for school going boys and girls in the vaccination schedule, and some countries have made HPV vaccination mandatory.¹⁹⁻²¹ It is believed that there is low knowledge of HPV vaccination among Healthcare Workers (HCWs) in Armenia and they do not strongly recommend nor actively educate parents on the advantages of vaccinating against HPV.⁷

1.4 Factors of decision making

Numerous studies examine the factors of vaccine acceptability and describe the relation between them. (See Appendix B) Knowledge emerges as the most influential among all the identified factors that contribute to vaccine acceptability.²² Knowledge of an individual is influenced by attitude and belief, and vice versa.²² Attitude is determined by the perceived effectiveness, the safety of vaccines and ease of access.²³⁻²⁶ Some studies also claim that the knowledge had less effect on vaccine acceptability and attitude seemed the most influential.²⁷ A positive association was found between the knowledge, the belief and the vaccine acceptability of parents about HPV vaccination.²² The credibility of the information the parents receive and the perceived effectiveness of the vaccine preventing cancer are associated with the attitude of the parents towards the HPV vaccine.²⁸ The source of information was seen to positively influence vaccine uptake among parents.²⁹ Multiple sources of information were noted among parents, mainly the internet, friends, and relatives.²⁹ The higher perceived benefit of HPV vaccination was associated with higher vaccine acceptance.²² Studies found that the higher-income of the parents was related

to higher knowledge of HPV.²² The differences in knowledge on HPV could also be attributed to the socio-demographic characteristics of the population.²²

Fear of complications from vaccinating was noted as a factor that reduces the vaccine acceptability.²⁵ Also, the trust in the safety of vaccines and knowledge on the efficacy of such vaccines strongly influences decision making.³⁰ Different studies found religion as a factor potentiating and also hindering HPV vaccine uptake.^{22,31,32} Among the studies published on the HPV vaccine acceptance and vaccine uptake, the commonly adjusted variables were the age of parent, age of child, parent's education and employment status, region (urban/rural), insurance coverage, race/ethnicity, religion, annual household income, history of STD.³³

Ethnicity and healthcare insurance coverage of the vaccine were noted to significantly influence HPV vaccination.³³ However, a population of similar ethnicity in a country and the availability of HPV vaccine free of charge at healthcare centers, like in Armenia, may not be factors that influences vaccine acceptability.³³ Also, perceived norms of getting vaccinated could likely explain the behavior of parents in vaccinating their child.²⁹

Self-awareness about health could possibly explain the health behavior of an individual.

Smoking status, alcohol consumption status and frequency of general health checkups may explain the health behavior.^{34,35} Smokers tend to have higher vaccine acceptability, but no other behavior such as alcohol consumption and regular physical exercise were related to vaccine acceptability.^{34,35} The recommendation to vaccinate against HPV from the physicians was noted to positively influence the decision making of the parents.³⁶

1.5 Rationale of the project

It is evident that educational campaigns and other targeted interventions to create awareness, such as providing educational materials and specialist consultations can increase knowledge on public health issues and influence decision-making. In Armenia, the Ministry of Health, NCDCP Armenia, and other public health institutions are regularly publishing content both online in social media pages, websites and offline by posters and pamphlets, on the dangers of HPV infection and the advantages of HPV vaccination.²⁷ Also, evidence suggests that written information on HPV was not sufficient to increase the knowledge of parents and influence the parents' attitude on vaccinating their child against HPV.²⁷ Armenia, as a rapidly developing country, suffers from the misinformation available online and by word of mouth.^{37,38} Unclear information and misinterpretation of the HPV vaccine side effects have had a negative impact on HPV vaccine coverage in Armenia as parents refuse to vaccinate their daughter against HPV.³⁹ Low HPV vaccination rates could be attributed to the speculation surrounding the unproved vaccine side effects such as, reduction of fertility and ability to get pregnant, and getting infected by presumed low-cost Gardasil vaccine among women who get vaccinated against HPV and, HPV vaccination supposedly influences young girls to be sexually active.^{19,37,38}

A study conducted in Italy concluded that information on health provided online is not accurate.⁴⁰ In the study, pro-vaxxers and anti-vaxxer online social groups were identified and information posted by the groups was analyzed on the legitimacy of the content shared, which showed disturbing results as most of the information was wrong.⁴⁰ However, the general population believes the information posted, without any hesitancy or without conducting any background research on the content.⁴⁰ If left unaddressed, anti-vaxxers may appear from

different socio-economic groups and different regions of Armenia, and might further reduce the childhood vaccination rate in the country.⁴⁰⁻⁴² (See Appendix C)

A comprehensive literature review was conducted and studies suggesting the effectiveness of using video interventions to address public health and medical problems were found; several examples are reported below. Although numerous education methods such as hand-outs, pamphlets, power-point presentation, and group discussion are available, no one method prove to be the most suitable and is always a challenge in using the appropriate methods in educating parents on HPV.^{27,43,44} A study conducted in Belgium, found that the use of the ‘Movie Model’ to educate parents on the risk of sedentary lifestyle among children was effective in increasing the parents’ self-efficacy and practices concerning their child’s physical activity and diet.⁴⁵ A study done in New York City illustrated the effectiveness of video-based education intervention promoting the use of condoms.⁴⁶ Such interventions are built on the foundations of culturally sensitive content to the target population.^{47,48}

Numerous studies suggest that parents are the main decision-makers in the vaccination status of their children, and Armenia is not different.^{2,49} Also, education interventions by a video demonstrating the risks and benefits of vaccinating against HPV proved to increase the parents’ behaviors on vaccination.^{47,50,51} A different study involving parents watching a video showing the risks and benefits of receiving the HPV vaccine at a clinical setting had higher odds of vaccinating their child against HPV.⁵²

Generally, videos targeting smoking awareness employ various strategies of showcasing a life story of someone who has been affected by the ill habit.⁵³ Such an intervention proved to be successful in reducing smoking rates in New York City and is still being used with regular

updates to address the everchanging social culture.^{54,55} Awareness films are also created targeting certain medical conditions like rheumatoid arthritis (RA) explained through the daily struggle of a patient with RA.⁵⁶

1.6 Aim and objectives of the study

The project aims to increase knowledge and belief about HPV and to increase the intention to vaccinate their daughter by demonstrating the advantages of vaccinating against HPV through a video intervention among parents of school-going girls in Yerevan, Armenia.

The primary objective of the study is:

- To evaluate the improvement in knowledge score on HPV and HPV vaccination by a video intervention from baseline and follow-up measurements among parents of school-going girls in Yerevan, Armenia

The secondary objectives of the study are:

- To assess the improvement in belief scores from baseline and follow-up measurements among parents who participated in the study
- To assess the improvement in intent to vaccinate their daughter from baseline and follow-up measurements among parents who participated in the study
- To establish a relation between the change in knowledge score and belief score on the intention to vaccinate against HPV

1.7 Study hypothesis

Null hypothesis: No difference in knowledge score from baseline and follow-up measurements will be illustrated among parents who participated in the study.

Alternative hypothesis: An improvement in knowledge score from baseline and follow-up measurements will be illustrated among parents who participated in the study.

2. Methods and materials

2.1 Conceptual framework

A literature review on the theoretical background in explaining the HPV vaccination rates and parental intention resulted in studies primarily using the Health Belief Model (HBM) and Theory of Planned Behavior (TPB). (See Appendix D) Studies incorporating the HBM have been successful in demonstrating the improvement in knowledge, belief and intention to vaccinate by an intervention.^{27,57,58} This study is designed integrating the concepts of HBM and TPB. The following outlines the constructs of the model and how facets of the intervention (video) are linked to the specific construct:

- i. Perceived susceptibility* - An individual's perception of the risk of acquiring a disease. The intervention shows that acquiring HPV infection is common and very possible.
- ii. Perceived severity* - An individual's perception of the seriousness of being affected by a disease. The intervention explains the possible results of contracting HPV, such as asymptomatic state requiring no treatment and the most severe condition of cancer with eventual death in severe conditions.
- iii. Perceived benefit* - The individual's perception of options available to reduce the risk of acquiring the disease. The intervention shows the interest of receiving the HPV vaccination to protect against HPV infection.
- iv. Perceived barriers* - The individual's perceived barriers in carrying out a health behavior to alleviate the risk of contracting a disease. The intervention attempts to improve barriers such as the lack of knowledge of the disease and mistrust of the quality of vaccines.

- v. *Cues to action and behavioral intention** - Stimulus to trigger the decision to perform a particular health behavior. The intervention shows that the Government of Republic of Armenia is strongly recommending vaccinating against HPV. Also, the intervention video shows the emotion of the father on raising a child, as a single parent, and will prompt the participants to realize that the health condition could happen to them.
- vi. *Self-efficacy* - An individual's ability to successfully perform a behavior. The intervention educates parents on the availability of effective vaccines free of cost at polyclinics, thus increasing the participant's intention to vaccinate their daughter.
- vii. *Attitudes** - The degree of an individual responding favorably or unfavorably to the behavior of interest. The intervention illustrates that the adverse reaction to the HPV vaccine is common to any vaccination and is mostly harmless. The benefit received is much more than the harm imposed by vaccinating.
- viii. *Norms** - The perception of subjective and social beliefs on health behavior. The intervention depicts the stigma among parents to discuss the sexual health of their children with them.
- ix. *Perceived behavioral control** - The parents are the decision-makers of the vaccination status of their children. In the video intervention, the parents are encouraged to act promptly to vaccinate their children before they become sexually active.

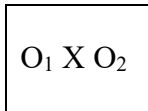
**Constructs of Theory of Planned Behavior*

2.2 Study design and setting

The study follows a pre-experimental panel design with a pre- and a post-test measurement. The project targets parents of school-going girls at the selected schools in Yerevan, Armenia. The project involves a video intervention, and tests the change in knowledge, belief scores, and intent to vaccinate, assessed before and after the intervention by a questionnaire. The rationale behind

the design of the study is that it allows accessing the effectiveness of the intervention to an exposure group. Similar studies have been done following a pre-test post-test design to evaluate the effectiveness of video intervention.^{47,51}

Campbell and Stanley's nomenclature of the study



O₁ indicates the pre-intervention measurement

O₂ indicates the post-intervention measurement

X indicates the intervention

2.3 Target population

The study targets the parents of school going girls who are eligible to receive HPV vaccination in Yerevan, Armenia.

Inclusion criteria

1. Parent of at least one daughter aged between 9 and 14, studying in the selected school
2. Have not vaccinated their daughter against HPV
3. Fluent in Armenian language

Exclusion criteria

1. Have vaccinated their daughter against HPV even with one dose

2.4 Sampling

Cluster sampling with pre-determined number of clusters followed by simple random sampling inside the cluster was applied. The list of all primary schools was obtained from the Yerevan Municipality website and two schools were randomly selected and were approached to participate.^{21,59} (See Appendix E) The schools were informed about the study, and a list of

students in grades 4 to 9 was obtained. The parents who satisfy the inclusion criteria above were randomly selected from the list and were given an invitation to participate in the study. (See Appendix F and G)

2.5 Intervention

The intervention is a 10-minute short film created in a novel manner adapted from life stories of HPV patients and cancer survivors from the US CDC and the WHO. The film focuses on a story about a woman affected by HPV and the emotions faced by her husband in raising their daughter and the storyline was developed in the Armenian context.^{60,61} The story was created in a culturally sensitive manner and was corrected for the legitimacy of medical facts and to avoid commercial bias by limiting references to any pharmaceutical company or drug name. (See Appendix H) The language of the intervention is Eastern Armenian. The short film included an in-video presentation on HPV and HPV vaccination created from the currently available statistics and information.^{1,3,17} (See Appendix I)

2.6 Variables and measures

Primary outcome: Composite knowledge score of HPV and HPV vaccination, treated as a continuous variable with a range of 0 to 14.

Secondary outcomes: Composite belief score, treated as a continuous variable with a range of 7 to 35; intent to vaccinate, treated as an ordinal variable with five levels of responses on a Likert scale with options from strongly disagree to strongly agree.

Other variables: Demographic information, healthcare provider recommendation, and quality of intervention.

Demographic variables of this study included participant's age, participant's relationship to the child, number and gender of children, marital status, education level, total monthly expenditure,

employment status, alcohol consumption, smoking status, vaccination status of their children, and frequencies of general health checkup and pap smear test.

The healthcare provider related question was treated as ordinal scale and was collected by four response options, from strongly disagree to strongly agree. The quality of intervention was treated as ordinal scale and was collected by a five-point Likert scale with options from very bad to very good.

2.7 Sample size calculation

The required sample size is calculated by using Guenther's formula for matched continuous data.⁶² Given that the scale for the knowledge score, the primary outcome, has an increment of 1, the effect size of 1 was used for sample size calculation. Between subject variance ($\sigma = 2.21$) was adopted from the previously published paper by Chia Chen et al. (2017).⁴⁷

$$n = \frac{(z_{1-\alpha} + z_{1-\beta})^2 (\sigma_\delta)^2}{\delta^2} + \frac{z_{1-\alpha}^2}{2} \text{-----} [1]$$

$$\alpha = 0.05, z_{1-\alpha} = 1.645; \beta = 0.1, z_{1-\beta} = 1.28$$

$$\text{Effect size } \delta = 1 \text{ (considering minimal important difference) -----} [2]$$

$$\sigma^2 = 2.21^2 = 4.9 \text{ -----} [3]$$

Following Julious paper⁶³ we estimated the standard deviation of difference (σ_δ) considering a correlation (ρ) between the responses of the same participant,

$$\sigma_\delta^2 = 2 \sigma^2 (1-\rho) \text{ -----} [4]$$

According to Julious, a correlation of 0.6-0.75 are the most commonly used values in published literature and to get the most conservative estimate for sample size a value of 0.6 was used.

Imputing [3] in [4],

$$\sigma_\delta^2 = 2 * 4.9 * (1-0.60) = 3.92 \text{ -----} [5]$$

Imputing [2] and [5] in [1], we get 36 pairs of observation.

Though studies suggest a low dropout rate, 20 % drop out was considered for this study.

Assuming a 20% attrition rate from pre- to post-test measurement, the required sample size was 44. The required sample was equally divided between two schools and 22 parents were to be recruited from each school. Most studies using such a design to demonstrate the effectiveness of an HPV awareness intervention targeting parents used a sample between 42 to 376.^{44,47,51}

2.8 Instrument

The parents completed a self-administered pre-post test of the same questionnaire adapted from previously published studies which was pre-tested among parents of school going girls in Yerevan before the study.^{21,47,51} The questionnaire examines the knowledge and belief of HPV and HPV vaccination and the intent to vaccinate. The pre-test included twelve demographic questions with a question about the pap test frequency, fourteen knowledge, and seven belief, and two intent to vaccinate questions. The pre-test required around 20 minutes to be completed. The post-test questionnaire consisted of knowledge, belief, and intent to vaccinate questions without demographic questions. The value of responses of knowledge domain questions were 'true'=1; 'false'=0; and 'don't know'=0. Questions 2,3,4,5,7 and 14 of knowledge domain are reverse scored where the values were 'true'=0; 'false'=1; and 'don't know'=0. The primary outcome variable was a composite knowledge score measured as a continuous variable and ranged from 0 to 14. The responses for the belief domain were measured by a five-point Likert scale and were, 'strongly disagree'=1; 'moderately disagree'=2; 'neither disagree nor agree'=3; 'moderately agree'=4; and 'strongly agree'=5. The composite belief score was also measured as a continuous variable ranging from 7 to 35. The intent to vaccinate questions followed a similar five-point Likert scale, as above, but the items were analyzed individually without calculation of cumulative score. The post-test included a suggestion space to express their thoughts on the

video intervention and the participants' opinion on the study and required another 20 minutes to complete. Questions related to religion were not asked as it was deemed sensitive to the study population. The English and Armenian version of the instrument are found in Appendix J and K.

2.9 Data collection and entry

The pre- and post-test data were collected on the same day as the intervention. The sequence of activity on the day of study was: 1) obtaining the consent of parents to participate in the study; 2) pre-test; 3) 10-minute video screening; 4) post-test and 5) conclusion. A team of two arrived at the schools to conduct the study with the necessary equipment to screen the short film and an adequate number of printed pre- and post-test questionnaires with consent forms. An incentive was given to the parents to thank them for participation in the study. The pre- and post-test were self-administered by the parents and a trained interviewer assistant was present to aid in clarifying any queries from the parents during the tests. The interviewer manual used to train the assistants for the data collection can be found in Appendix L. A codebook was created and the collected data was entered into SPSS v23. A double data entry was done in SPSS and the entered data was cleaned by range and frequency checking.

2.10 Data analysis

A descriptive analysis was done to illustrate the participants' characteristics. Continuous variables were reported as means and standard deviations, while the categorical variables as counts and frequencies. Paired responses to individual items between pre- and post-measurements were compared using McNemar's tests for knowledge domain (paired nominal data) and two sample paired (Wilcoxon) signed rank tests for beliefs and intention to vaccinate domains (paired ordinal data). A paired t-test was used to analyze the difference in composite knowledge and beliefs scores between the pre-test and post-test. A correlation test was

performed to explore the association between change in knowledge, belief, and intent to vaccinate considering the variables as continuous.

2.11 Ethical consideration

The study was approved by the Institutional Review Board of the American University of Armenia. Oral consent to participate in the study was obtained from the participants and they were informed about the voluntary nature and right to withdraw at any point if uncomfortable. The questionnaire folders were given randomly to the participants and no information that could identify an individual was collected. Anonymity of the collected information was assured. English and Armenian versions of consent forms can be found in Appendix M and N.

3. Results

3.1 Demographic information of the participants

In total, 47 parents were approached from both the schools and 42 parents participated in the study, out of which three were grandmothers and were removed from the analysis. The analysis was carried out with 39 eligible parents. All of the participants were mothers with a mean age of 38 years (SD= 5.90) (Table 1). Among the participants 23% had one child, 56% had two children and 15% had three children, and the age of their children ranged from 3 to 28 years.

Almost all of the participants were married (97.4%) and only 2 participants were single parents (2.6%). More than half of the parents (56.4%) had an institute or university degree, 20.5% had a college or secondary professional degree, and 23% had at least a secondary school education.

Around 37% (n=14) had a monthly family expenditure between 201,000 and 300,000 AMD, and less than 8% (n=3) more than 301,000 AMD. Around 29% mentioned that they do not want to mention their family expenditure. An equal number of the participants were employed (41%) and unemployed (41%), while the remaining were self-employed.

A majority of participants reported that they never consumed alcohol (58%) or consumed only less than once a week (37%). Almost all the participants said that they are non-smokers (95%). Two-thirds of the participants (67%) undergo a general health checkup once every 2 years or less, and 6% had never gone for a general health checkup. An almost equal number of participants have a pap smear test done once every 3 years or less (40%) and 37% never had a pap smear test.

Only 92% of the parents reported that they had vaccinated their child with all of the recommended childhood vaccines. Among the parents who did not vaccinate their child with all of the childhood vaccines stated that their child was contraindicated to receive vaccines due to a medical condition or developed an adverse reaction to vaccines thus had decided to discontinue further vaccination.

3.2 Results from pre-test

The mean composite knowledge score was 4.51 (SD=2.92) and the mean composite belief score was 20.54 (SD= 3.79) (Tables 2, 3 and 4). Almost all the knowledge questions had less than 50% of participants answering correctly. The question about whether a person could have HPV infection and not know about it for many years had 54% (n=21) of participants answering correctly, while only 15% (n=6) answered correctly to the question about HPV causing not only cervical cancer.

Around 40% of participants reported that they moderately disagree and 32% strongly disagree to vaccinate their daughter against HPV. Also, 34% of participants moderately agree that they will discuss HPV vaccination with their spouse and 32% moderately disagree to discuss HPV vaccination (Table 5).

3.3 Results from post-test

The post-test knowledge score (M= 9.31; SD=3.15) and belief score (M= 23.56; SD=4.51) improved by 4.80 (SD=2.92) and 3.03 (SD=4.58) respectively from pre-test ($p<0.001$) (Tables 2, 3 and 4). Almost all questions in the knowledge domain had over 50% of participants answering correctly. The question about HPV having more than one type of strain was answered correctly by 95% of the participants and at the lowest, only 41% answered correctly that an individual who is sexually active would get infected with at least one of the strain of HPV at some point in their lifetime.

In the post-test, one-third of the participants (33.3%) reported that they neither agree nor disagree to vaccinate their daughter against HPV showing an improvement from the pre-test measurement (Table 5). Around one-third of the participants (34.2%) improved their intent to vaccinate their daughter against HPV from pre-test to post-test, while 60.5% did not improve and 5.2% of participants showed a negative change in their intention ($p<0.05$) (Table 6). Also, 43.6% of the participants reported that they moderately agree to discuss about HPV vaccination with their spouse, an increase from 34.2% in the pre-test (Table 6). There was no significant association found between change in knowledge score, belief score and intent to vaccinate (Table 7).

3.4 Quality of intervention and results from open-ended question

Half of the participants (50%) reported 'neutral' and around 39% reported 'good' as the quality of the video intervention (Table 8). Over two-thirds of the participants (71%) reported that they would not vaccinate their daughter against HPV even if their health care professional recommends vaccinating and only 10.5% of the participants strongly agreed to vaccinate when recommended (Table 9).

Among participants who did not improve their intent to vaccinate their daughter against HPV, the lack of trust of the vaccine was the most frequently mentioned reason (46.2%). Some participants also mentioned that they are against vaccination for HPV (19.2%) and feel the vaccine is not safe (15.4%). Participants who reported lack of trust mentioned concerns over the effectiveness in preventing HPV infection, the quality and the composition of the vaccine, personal experience of witnessing adverse reactions with their child during previous vaccinations and less knowledge on the vaccine's side effect. Participants who were against vaccination mentioned ways of detecting HPV infection, such as regular pap smear tests and ways to get treated at earlier stages of the disease, and do not want to expose their daughter to a vaccine when other efficient harmless methods are available. Participants who perceive the vaccine is unsafe mentioned concerns over the target age group, such as exposing the child at a younger age when the immune system may not have completely developed and the possible side effects that could be long-standing.

4. Discussion

4.1 Main findings

The analysis showed that there was a significant increase of knowledge score, belief score and intention to vaccinate their daughter against HPV after the intervention. Though there were questions where the participants did not answer correctly or improve in post-test measurement, the cumulative score significantly increased.

All participants in the study were mothers. This could possibly be explained that mothers are likely to attend programs related to the sexual health of their daughter.^{64,65} From the pre-test scores, it can be seen that the parents had low knowledge and belief on HPV. It was consistent with studies that examined such domains around the world and in Armenia.^{44,59,66} Studies show

that the parents have increased their knowledge by 54% relative to the pre-test of their intervention.⁴⁴ In this study, the participants increased their knowledge by 106.4% relative to the pre-test, that is, doubled their knowledge. Though other studies reported a shortening of the standard deviation of the mean knowledge score from pre-test to post-test, this study saw a slight increase in the standard deviation in the post-test.⁴⁴ Another intervention study that explored attitude toward HPV vaccination reported an increase of 14.3% in the attitude score during the post-test measurement.⁵¹ We observed similar increase of belief score by 14.8% in this study.

The majority of the participants who did not improve their intent to vaccinate after the intervention mentioned that they lack trust in the quality of the vaccine. This can be linked to spread misinformation on the vaccine and the rumors around the unproven side-effects and was consistent with published studies.^{19,22,67} Parents who mentioned other ways of detecting cervical cancer had lower perceived benefit from the vaccination.⁶⁷

Previous studies suggest that an increase in knowledge and belief on HPV may increase HPV vaccine acceptance.²² But this study did not find any association between the improvement in knowledge and belief score and intent to vaccinate. The finding was consistent with previous studies.⁵⁹

Contrary to other studies, healthcare professional or physician recommendation to vaccinate was not seen as a facilitator as over two-thirds of the participants stated that they would still not vaccinate their daughter against HPV.^{67,68} The parents felt that vaccinating their child against HPV as an unnecessary responsibility.⁶⁹ Though this finding is not commonly seen everywhere, it is one such finding which could explain why the parents do not show interest in vaccinating their daughters. A few studies had a similar finding which was identified as a barrier to the

parents in vaccinating their child with childhood vaccinations and not for the HPV vaccination.^{70,71}

Questions related to culture and religion were omitted from the instrument as they were considered not informative as the population in Armenia share similar cultural and religious characteristics.^{72,73} Participants mentioned that the information given in the video format was easy to follow and understand. This method of education by incorporating the use of a short film and in-video presentation to bring awareness can be self-administered and seems to require minimal assistance. Some participants also mentioned that more information of the sources and the side-effects were needed.

4.2 Strengths and limitations

This was the first study to be conducted to improve HPV related knowledge and belief through a video intervention in Armenia. The participants were recruited from two different locations in the city and may have included parents with characteristics that could be a representative sample of the parents in the city. The intervention was developed on the background of current medical knowledge available and culturally appropriate context using theoretical models. Medical specialists and organizations were consulted in drafting the story and checking the legitimacy of medical facts and statistics depicted in the film. The instrument was pre-tested and revised before entering the field, and the two assistants, who assisted in data collection, were trained following the interviewer protocol developed specifically for this study.

The study design of one group pre- and post-test did not enable the ability to establish the superiority in the effectiveness of the video intervention than that of conventional posters, pamphlets, and other existing HPV awareness programs in the country. The participants were mainly recruited by random sampling from the list of all students with parents who were eligible

to participate in the study. But some of the parents were recruited on the day of the intervention due to absence of the parents selected by random sampling. Parents who were available at the school during that time were randomly approached to participate in the study. Also, no follow up of the participants was done and the number of parents who initiated vaccination of their daughter among those who showed improvement in intent to vaccinate was not accessed.

4.3 Recommendations

From the experience of this study, it was realized that the parents in Armenia require more information on the side effects of the vaccine and assurance of its quality and effectiveness in preventing cervical cancer. Educational programs focused on the side effects and quality of the HPV vaccine to increase the trust of the parents are needed. Also, future interventions could be targeted to parents with children less than 9 years of age to deliver information regarding HPV vaccination in their pre-contemplation stage before their child becomes eligible to receive the vaccine.⁷⁴

A considerable number of participants who do not want to vaccinate their daughter against HPV mentioned that they were against vaccination of any kind including childhood vaccinations for various reasons. If not addressed soon, the proportion of general population who are against vaccination may increase and potentiate the already reducing childhood vaccination rates in the country and an increase of vaccine-preventable morbidity and mortality may be seen in the future.⁴⁰⁻⁴²

4.4 Conclusion

A multimedia education intervention using a short film was well received by parents and proves to be an efficient tool to improve knowledge, beliefs about HPV and intent to vaccinate against HPV. Such a method of education could be developed regularly with updates and be

disseminated among the general population by the stakeholders. The internet as a source of information may not always provide correct knowledge but could be used to distribute various information regarding HPV by officially verified government websites and social media. Since Armenia is one of the developing countries and the citizens have access to the internet, the opportunity of using the internet as a mass media to provide information for the good of public health could be leveraged.

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Tables

Table 1. Demographic information of the participants

	Total % (n)
All participants	100% (39)
Age, years	
Mean (SD)	38 (5.904)
Participant's relation to the child	
Mother	100 (39)
Father	00 (00)
Guardian	00 (00)
Number of children (n=37)	
1	23.1 (9)
2	56.4 (22)
3	15.4 (6)
Marital status (n=38)	
Married	97.4 (37)
Divorced	00 (00)
Widowed	00 (00)
Never married	00 (00)
Single parent	2.6 (2)
Other	00 (00)
Education (n=39)	
Secondary	7.7 (3)
High school	5.1 (2)
College/ Secondary professional	20.5 (8)
Institute/ University	56.4 (22)
Postgraduate/ Doctoral	10.3 (4)
Monthly expenditure (AMD) (n=38)	
Up to 50,000	2.6 (1)
51,000-100,000	5.3 (2)
101,000-200,000	18.4 (7)
201,000-300,000	36.8 (14)
Above 301,000	7.9 (3)
I don't want to mention	28.9 (11)
Employment status n=39	
Employed	41.0 (16)
Self-employed	12.8 (5)
Unemployed	41.0 (16)
Other	5.1 (2)
Alcohol consumption status (n=38)	
Never	57.9 (22)
Less than once a week	36.8 (14)
One to three times a week	5.3 (2)
Four or more times a week	00 (00)

	Total % (n)
Daily	00 (00)
Smoking status (n=38)	
Never	94.7 (36)
1-5 cigarettes per day	5.3 (2)
5-10 cigarettes per day	00 (00)
10-20 cigarettes per day	00 (00)
More than 20 cigarettes a day	00 (00)
General health checkup status (n=39)	
Never	5.1 (2)
Once every 2 years or less	66.7 (26)
Once every 2-5 years	15.4 (6)
More than 5 years	12.8 (5)
Vaccine status of their child/children (n=39)	
Have vaccinated with all of the recommended vaccines	92.3 (36)
Have not vaccinated with some/ all of the recommended vaccines	7.7 (3)
Frequency of pap smear test (n=35)	
Never	37.1 (13)
Once every 3 years or less	40.0 (14)
Once every 3-5 years	20.0 (7)
Once every 5 years	2.9 (1)

Table 2. Pre-test and post-test scores of the participants

	Mean (SD)			
	Pre-test	Post-test	Difference	p-value*
Composite knowledge score	4.51 (2.92)	9.31 (3.15)	4.80 (2.92)	<0.001
Composite belief score	20.54 (3.79)	23.56 (4.51)	3.03 (4.58)	<0.001

**Results from one-sided paired t-test*

Table 3. Pre-test and post-test knowledge domain

	% (n) of participants gave correct answer		
	Pre-test	Post-test	p-value*
1. HPV is the most common type of STD, more common than HIV/AIDS.	43.6 (17)	84.6 (33)	<0.001
2. HPV infection always has visible signs or symptoms.	28.2 (11)	66.7 (26)	<0.001
3. There is only one type of HPV.	30.8 (12)	94.9 (37)	<0.001
4. HPV is transmitted only through intercourse.	23.1 (9)	61.5 (24)	<0.001
5. HPV causes only cancer of cervix.	15.4 (6)	59.0 (23)	<0.001
6. HPV can also cause genital warts.	38.5 (15)	48.7 (19)	0.227
7. HPV can affect only females	30.8 (12)	82.1 (32)	<0.001
8. Having many sexual partners increases the risk of getting HPV.	51.3 (20)	59.0 (23)	0.291
9. Most of sexually active people will get HPV at some point in their lives.	20.5 (8)	41.0 (16)	0.004
10. A person could have HPV for many years without knowing it.	53.8 (21)	87.2 (34)	<0.001
11. HPV infection can be prevented only by vaccination.	17.9 (7)	56.4 (22)	<0.001
12. HPV vaccine is most effective only when is given to individual before being sexually active.	30.8 (12)	59.0 (23)	0.002
13. The HPV vaccines are most effective if given to people who've never had sex.	35.9 (14)	69.2 (27)	<0.001
14. HPV vaccine is effective in preventing only cervical cancer.	30.8 (12)	61.5 (24)	0.009

**Results from McNemar's test for paired nominal data*

Table 4. Pre-test and post-test belief domain

	% (n) of participants selected each answer		
	Pre-test	Post-test	p-value*
15. I think Condoms can protect against HPV.			
Strongly Disagree	5.3(2)	20.5(8)	<0.001
Moderately Disagree	21.1(8)	66.7(26)	
Neither Disagree nor Agree	42.1(16)	12.8(5)	
Moderately Agree	21.1(8)	00(00)	
Strongly Agree	10.5(4)	00(00)	
16. I feel HPV vaccine is unsafe.			
Strongly Disagree	00(00)	11.4(4)	0.003
Moderately Disagree	21.1(8)	28.6(10)	
Neither Disagree nor Agree	36.8(14)	34.3(12)	
Moderately Agree	26.3(10)	17.1(6)	
Strongly Agree	15.8(6)	8.6(3)	
17. I feel HPV vaccine may cause some serious health problems like infertility, cancer, etc.			
Strongly Disagree	2.7(1)	16.2(6)	0.042
Moderately Disagree	13.5(5)	16.2(6)	
Neither Disagree nor Agree	35.1(13)	21.6(8)	
Moderately Agree	27.0(10)	35.1(13)	
Strongly Agree	21.6(8)	10.8(4)	
18. One dose of HPV vaccine is enough to develop immunity.			
Strongly Disagree	8.1(3)	13.5(5)	0.005
Moderately Disagree	24.3(9)	59.5(22)	
Neither Disagree nor Agree	54.1(20)	21.6(8)	
Moderately Agree	13.5(5)	5.4(2)	
Strongly Agree	00(00)	00(00)	
19. The HPV vaccine protects from every type of HPV.			
Strongly Disagree	7.7(3)	10.8(4)	0.211
Moderately Disagree	35.9(14)	40.5(15)	
Neither Disagree nor Agree	35.9(14)	29.7(11)	
Moderately Agree	15.4(6)	18.9(7)	
Strongly Agree	5.1(2)	00(00)	
20. HPV vaccine can cure HPV infection.			
Strongly Disagree	5.6(2)	15.8(6)	0.182
Moderately Disagree	44.4(16)	42.1(16)	
Neither Disagree nor Agree	33.3(12)	28.9(11)	
Moderately Agree	13.9(5)	13.2(5)	
Strongly Agree	2.8(1)	00(00)	

	% (n) of participants selected each answer		
	Pre-test	Post-test	p-value*
21. At this moment, I feel uncomfortable talking to my child about sexual health.			
Strongly Disagree	23.7(9)	23.1(9)	0.213
Moderately Disagree	31.6(12)	30.8(12)	
Neither Disagree nor Agree	10.5(4)	23.1(9)	
Moderately Agree	31.6(12)	17.9(7)	
Strongly Agree	2.6(1)	5.1(2)	

**Results from Two-sampled paired Wilcoxon Signed-rank test*

Table 5. Pre-test and post-test intent to vaccinate

		% (n) of response		
		Pre-test	Post-test	p-value*
1. I intend to vaccinate my child against HPV.				
	Strongly Disagree	31.6 (12)	20.5 (8)	0.010
	Moderately Disagree	39.5 (15)	30.8 (12)	
	Neither Disagree nor Agree	21.1 (8)	33.3 (13)	
	Moderately Agree	2.6 (1)	12.8 (5)	
	Strongly Agree	5.3 (2)	2.6 (1)	
2. I will discuss about HPV vaccination with my spouse/partner.				
	Strongly Disagree	10.5 (4)	17.9 (7)	0.126
	Moderately Disagree	31.6 (12)	17.9 (7)	
	Neither Disagree nor Agree	18.4 (7)	10.3 (4)	
	Moderately Agree	34.2 (13)	43.6 (17)	
	Strongly Agree	5.3 (2)	10.3 (4)	

**Results from Two-sampled paired Wilcoxon Signed-rank test*

Table 6. Change in intent to vaccinate from pre-test to post-test

	Number of participants	p-value*
1. I intend to vaccinate my child against HPV.		
Negative Ranks	2	
Positive Ranks	13	0.020
Unchanged	23	
Total (n)	38	
2. I will discuss about HPV vaccination with my spouse/partner.		
Negative Ranks	8	
Positive Ranks	10	0.252
Unchanged	20	
Total (n)	38	

*Results from Wilcoxon signed rank test.

Table 7. Correlation between the change in intent to vaccinate and change in scores

	Knowledge score	Belief score	Intent to vaccinate
Knowledge score	1		
Belief score	0.205*	1	
Intent to vaccinate	0.174**	0.086***	1

* p=0.210

** p=0.296

***p=0.606

Table 8. Quality of intervention

Question no. 26. The quality of the intervention is... (n=34)

	% (n) of the response
Very bad	8.8 (3)
Bad	2.9 (1)
Neutral	50 (17)
Good	26.5 (9)
Very good	11.8 (4)

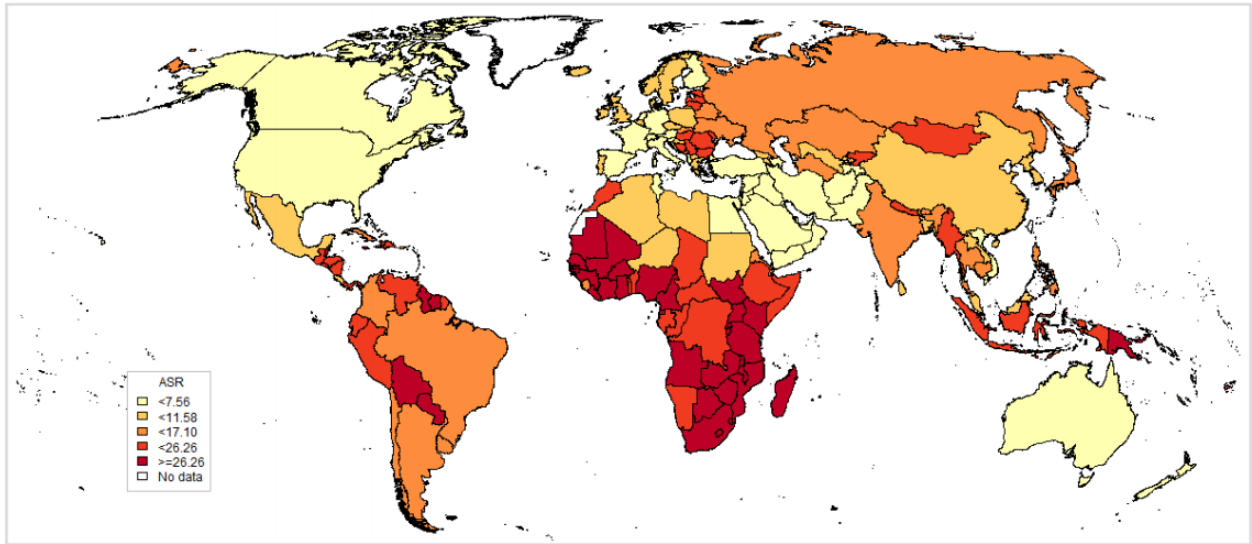
Table 9. Will parents vaccinate their daughter if their healthcare provider recommends HPV vaccination?

Question no. 25. If my healthcare provider recommends HPV vaccination for my child, I would vaccinate my child against HPV (n=38)

	% (n) of the response
Strongly disagree	28.9 (11)
Moderately disagree	42.1 (16)
Moderately agree	18.4 (7)
Strongly agree	10.5 (4)

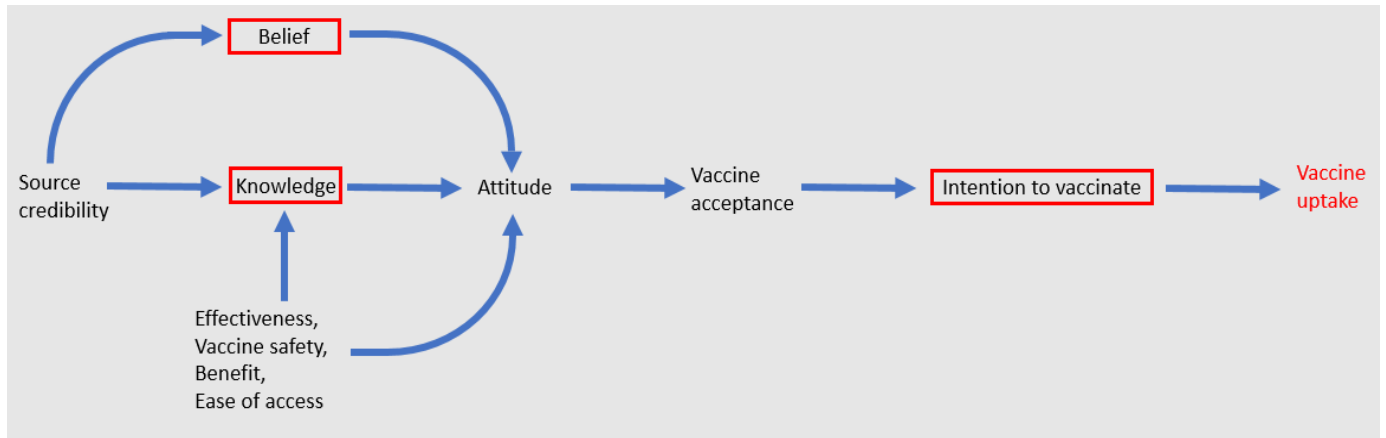
Appendix section

Appendix A. Global statistics on HPV



Source: Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, Bray F (2018). Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available from: <https://gco.iarc.fr/today>

Appendix B. Factors leading to decision-making



Appendix C. Childhood vaccination rates in Armenia

ARMENIA: RATE OF VACCINATION AMONG CHILDREN (%)

Vaccines	1990	1995	2000	2005	2010	2014	2015	2016	2017	2018
Hepatitis B	-	-	-	89.2	94.3	97.5	97.9	97.7	97.4	97.0
BCG (Tuberculosis)	83.5	84.0	96.8	94.8	99.1	98.9	99.3	99.1	99.2	98.7
DTP/Hepatitis B/ Haemophilus influenza B	85.3	98.0	93.3	85.6	93.8	93.3	94.4	94.3	93.9	92.5
OPV 3 (Polio)	91.9	93.0	96.2	89.4	95.5	95.2	96.2	96.0	95.6	94.1
Rota-2	-	-	-	-	-	91.3	93.4	93.8	94.0	92.5
MMR -1	95.2	96.0	91.6	94.4	97.3	96.9	97.0	97.0	96.4	95.3

Notes:

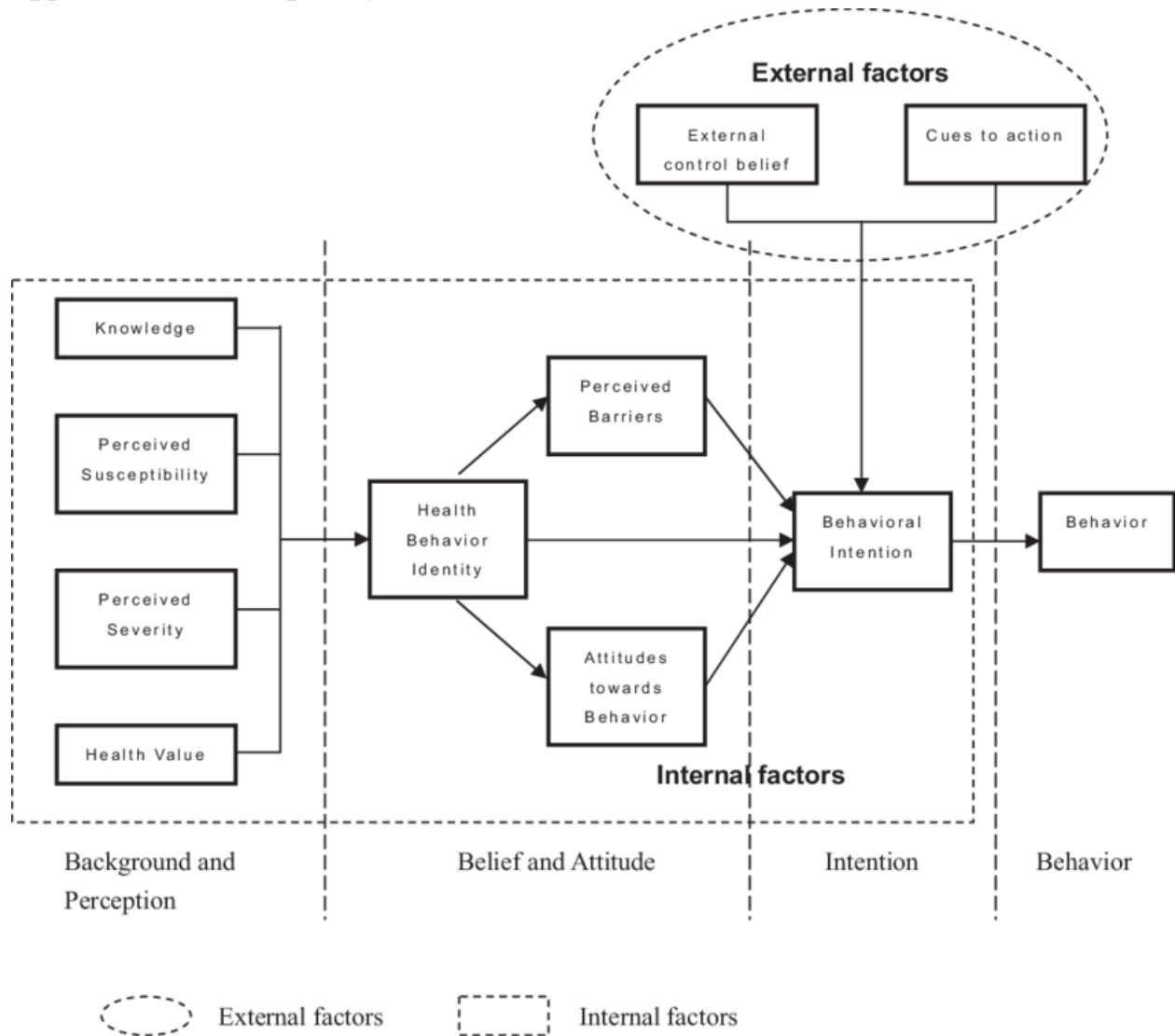
Up to 1-year old children – Hepatitis B, BCG, DTP/Hepatitis B/Haemophilus influenza B, OPV 3, Rota-2

Up to 2-year old children – MMR-1, OPV 4, DTP

Up to 7-year old children – MMR-2, OPV 5, DTP-M-1

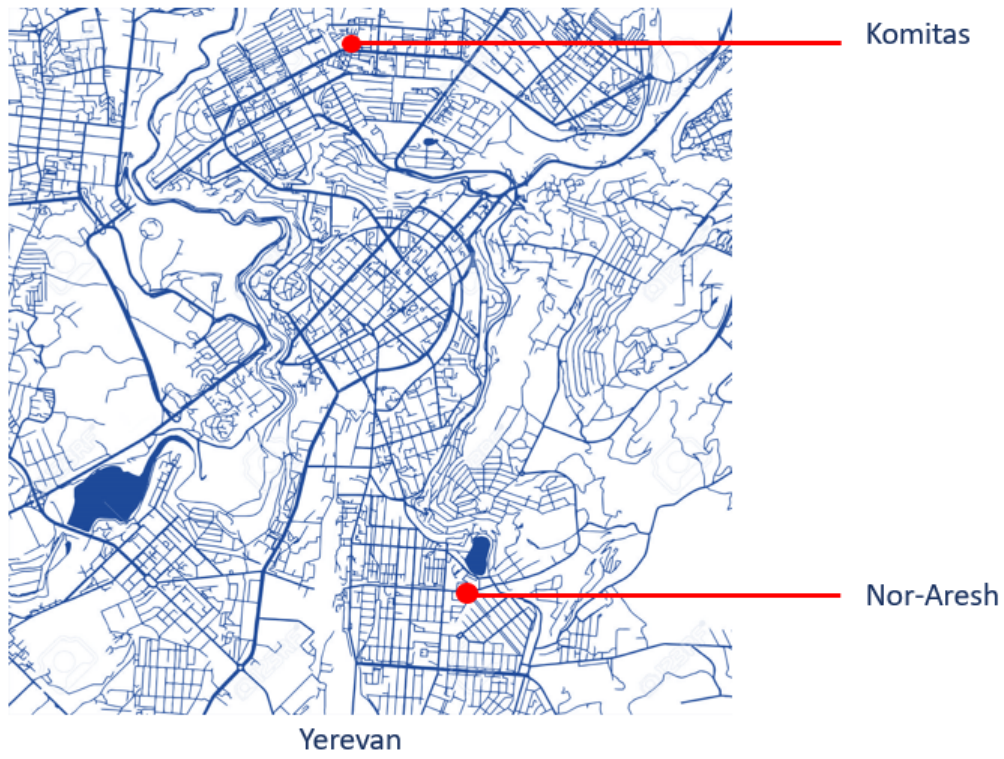
Source: Statistical Yearbook “Health and Healthcare” 2019. National Institute of Health of Armenia, nih.am

Appendix D. Conceptual framework



Source: Sun, Xinying Guo, Yan, Wang, Sisun and Sun, Jing. Predicting iron-fortified soy sauce consumption intention: application of the theory of planned behavior and health belief Model. *Journal of Nutrition Education and Behavior*. 2006; 38:276-85. doi:10.1016/j.jneb.2006.04.144.

Appendix E. Study locations (schools)



Appendix F. Invitation to participate (English version)

Sub: Recruitment of the parents at the school for the study conducted by the master's student of the American University of Armenia.

February xx, 2020.

Dear parent,

Parents of girls aged 9 to 14 are invited to participate in the study conducted by Rohith Sharan Sankaran, a second-year Master of Public Health student studying at the American University of Armenia.

The project is a health education study targeting parents of school-going children in Yerevan, Armenia. As parents are the decision-makers of their child's vaccination status, to improve the rate of vaccination against Human Papillomavirus (HPV), it is essential to educate the parents and increase awareness about the dangers of HPV and the advantages of being vaccinated against such a serious disease.

You will be shown a 10-minute short film in the Armenian language and will be asked to answer a survey before and after the screening of the film. The total duration of the pre-/post-test including the screening of the short film and obtaining consent will be no more than 1 hour and 15 minutes. The participants will receive a small gift as a token of appreciation for participation in the study.

Please make sure that you satisfy the following inclusion criteria.

Inclusion criteria:

- 1. That you are a parent of at least one daughter aged between 9 and 14, studying in this school.*
- 2. That you have not vaccinated your daughter against HPV.*
- 3. That you are fluent in the Armenian language.*

If you satisfy the following exclusion criteria, even if you have satisfied two of the above-mentioned inclusion criteria, you are not eligible to participate.

Exclusion criteria:

- 1. Have vaccinated your daughter against HPV (at least one dose).*

You are requested to come to the school on February xx, 2020 at 00:00 am (0000hrs). The meeting will take place on the school grounds in a room designated by Mr/Mrs. X, director of the school.

In closing, your support of this important health effort is much appreciated. Should you have any questions, please contact Diana Muradyan (094471823).

Yours sincerely,

Rohith Sharan Sankaran, MD©, MPH ©

Turpanjian School of Public Health, American University of Armenia, Class of 2020.

Please fill the following form, put the letter into the provided envelope and return the closed through your daughter to the student researcher who will come to the school to collect this form on February xx, 2020.

Please check the boxes mentioned below.

1. I am a parent of a daughter aged between 9 and 14, studying in this school.	True <input type="checkbox"/>	False <input type="checkbox"/>
2. I have not vaccinated my daughter against HPV.	True <input type="checkbox"/>	False <input type="checkbox"/>
3. I am fluent in the Armenian language.	True <input type="checkbox"/>	False <input type="checkbox"/>
4. I did not vaccinate my daughter even with one dose of Human Papillomavirus vaccine.	True <input type="checkbox"/>	False <input type="checkbox"/>

If you have checked all the answers as true, you are eligible and are invited to participate in the study on February xx, 2020 at xx:00 am (0000hrs) at xx school.

Please answer the following question and fill the details as required (check one box only),

1. Yes, I would like to participate in the study.

Please provide your contact number _____

(You will be contacted to confirm your participation and to provide detailed information about the meeting. The provided information by you will only be available to the research team)

2. No, I do not want to participate in the study.

Appendix G. Invitation to participate (Armenian version)

Թեմա. Դպրոցում ծնողների հետ՝ քննարկման կազմակերպում՝ Հայաստանի ամերիկյան համալսարանի մագիստրատուրայի ուսանողի կողմից իրականացվող ուսումնասիրության համար:

Փետրվար xx, 2020 թվական:

Սիրելի ծնողներ,

9-14 տարեկան աղջիկների ծնողները հրավիրվում են մասնակցելու Հայաստանի ամերիկյան համալսարանի հանրային առողջապահության մագիստրատուրայի երկրորդ կուրսի ուսանող Ռոհիթ Շարան Սանկարանի կողմից անցկացվող ուսումնասիրությանը:

Այս հետազոտությունը իրենից ներկայացնում է կրթական ծրագիր և թիրախային խումբը հանդիսանում են ծնողները, ում երեխաները սովորում են Երևանի դպրոցներում: Քանի որ ծնողներն են հանդիսանում են իրենց երեխաների պատվաստման վերաբերյալ որոշումներ կայացնողները՝ այդ իսկ պատճառով «Մարդու պապիլոմա» վիրուսի (ՄՊՎ) դեմ պատվաստումների մակարդակը բարելավելու համար անհրաժեշտ է ծնողներին կրթել և բարձրացնել նրանց իրազեկվածությունը ՄՊՎ-ի վտանգների և այդ լուրջ հիվանդության դեմ պատվաստվելու առավելությունների վերաբերյալ:

Ձեզ կցուցադրվի 10 րոպե տևողությամբ հայերեն կարճամետրաժ ֆիլմ և կխնդրվի ֆիլմի ցուցադրությունից առաջ և հետո պատասխանել հարցմանը: Նախնական և հետագա հարցման ընդհանուր տևողությունը, ներառյալ կարճամետրաժ ֆիլմի ցուցադրումը և մասնակիցների համաձայնությունը ստանալը, կտևի ոչ ավել, քան 1 ժամ 15 րոպե: Մասնակիցները կստանան փոքրիկ նվեր՝ որպես գնահատանքի նշան ուսումնասիրությանը մասնակցելու համար:

Խնդրում եմ համոզված եղեք, որ դուք համապատասխանում եք հետևյալ ընդգրկման հատկանիշներին.

Ընդգրկման չափանիշները.

1. Դուք ունեք այս դպրոցում սովորող 9-ից 14 տարեկան առնվազն մեկ դուստր,
2. Չեք պատվաստել ձեր դստերը ՄՊՎ-ի դեմ,
3. Տիրապետում եք հայերեն լեզվին:

Չընդգրկման չափանիշը.

1. Արդեն պատվաստել եք ձեր դստերը ՄՊՎ-ի դեմ (առնվազն մեկ դոզա):

Ծնողներին խնդրում ենք դպրոց գալ 2020 թվականի փետրվարի xx-ին, ժամը xx:00-ին: Հանդիպումը տեղի է ունենալու դպրոցի տարածքում՝ դպրոցի տնօրեն X-ի կողմից հատկացված սենյակում:

Եզրափակելով թույլ տվեք նշել, որ մենք կանխավ երախտապարտ ենք առողջապահական այս կարևոր նախաձեռնությանը Ձեր աջակցության համար: Հարցեր ունենալու դեպքում զանգահարեք Դիանա Մուրադյանին 094471823 հեռախոսահամարով:

Հարգանքով,

Ռոհիտ Շարան Սանկարան, MD ©, MPH ©

Թրականճեան հանրային առողջապահության ֆակուլտետ, Հայաստանի ամերիկյան համալսարան, 2018-2020 թթ. կուրս:

Խնդրում եմ լրացնել ստորև նշված ձևաթուղթը, դնել ծրարի մեջ և փակված ծրարը Ձեր երեխայի հետ ուղարկեք դպրոց, որպեսզի նա փոխանցի այն ուսանող հետազոտողին, որը կգա դպրոց՝ այս ձևաթուղթը վերցնելու համար:

Խնդրում ենք ստուգել ստորև նշված վանդակները:

5. Ես ունեմ 9-ից 14 տարեկան դուստրով սովորում է այս դպրոցում:	Ճիշտ է <input type="checkbox"/>	Միսալ է <input type="checkbox"/>
6. Ես դստերս չեմ պատվաստել ՄՊՎ-ի դեմ:	Ճիշտ է <input type="checkbox"/>	Միսալ է <input type="checkbox"/>
7. Ես տիրապետում եմ հայերենին:	Ճիշտ է <input type="checkbox"/>	Միսալ է <input type="checkbox"/>
8. Ես չեմ պատվաստել դստերս ՄՊՎ-ի պատվաստանյութի նույնիսկ մեկ դոզայով:	Ճիշտ է <input type="checkbox"/>	Միսալ է <input type="checkbox"/>

Եթե դուք բոլոր հարցերին նշել եք «ճիշտ է» պատասխանը, ապա Դուք հրավիրվում եք մասնակցելու **2020 թ-ի փետրվարի xx-ին, ժամը xx:00-ին xx դպրոցում** տեղի ունեցող ուսումնասիրությանը:

Խնդրում եմ պատասխանել հետևյալ հարցին և համաձայնության դեպքում տրամադրել Ձեր հեռախոսահամարը (նշեք միայն մեկ ճիշտ պատասխան),

1. Այո, ես կցանկանայի մասնակցել այդ հետազոտությանը:

Խնդրում ենք տրամադրել ձեր կոնտակտային համարը

(Ձեզ հետ կկապվեն՝ ձեր մասնակցությունը հաստատելու և հանդիպման մանրաստաները հայտնելու համար: Ձեր տրամադրած տեղեկատվությունը հասանելի կլինի միայն հետազոտական խմբին)

2. Ոչ, ես չեմ ուզում մասնակցել հետազոտությանը:

Appendix H. Intervention (Synopsis of the short film)

The film begins at a hospital setting where the doctor discloses the cancer status of the wife who is waiting outside the doctor's room, to the concerned husband. The husband tries to argue with the doctor how his wife got cervical cancer by a sexually transmitted disease (Human Papillomavirus - HPV) when they practice monogamous relationship. The doctor disproves the husband's argument with medical facts. The husband later exits the room to his waiting wife and breaks down on seeing her.

The film moves six years into the story. The father and their 5-year old daughter takes a taxi, enroute to meet the mother (wife). The taxi driver strikes up a conversation with the child while the father (husband) is lost in his thoughts. The father and the child arrives at a cemetery and the father lays the flower bouquet on the grave of the mother and delivers a monologue of how he is unable to provide a mother's love that their daughter deserves.

In-video presentation about HPV is shown. The film ends on a positive note with an alternative storyline where the father and the daughter visits the mother, alive and well, at a park.

Appendix I. Intervention (In-video presentation script)

In-video Presentation - HPV

ՄՊՎ վերաբերյալ տեսանյութ

1.	<p>HPV is the most common Sexually Transmitted Disease (STD), more common than HIV/AIDS.</p> <p>ՄՊՎ-ն սեռական ճանապարհով փոխանցվող ամենատարածված հիվանդությունն է, ավելի տարածված քան ՄԻԱՎ/ՁԻԱՀ-ը:</p>
2.	<p>HPV has more than 100 types of which two types 16 and 18 are high risk, which are cancer causing.</p> <p>Գոյություն ունի ՄՊՎ ավելի քան 100 տեսակ, որոնցից 16 և 18 տիպերը բարձր ռիսկի քաղցկեղածին են:</p>
3.	<p>HPV affects both men and women</p> <p>ՄՊՎ-ով վարակվում են և՛ տղամարդիկ, և՛ կանայք:</p>
4.	<p>HPV not only causes cervical cancer but also cancer of anus, vagina, vulva, penis and oropharynx</p> <p>ՄՊՎ-ն առաջացնում է ոչ միայն արգանդի վզիկի, այլ նաև բերանի, հետանցքի, կանանց և տղամարդկանց սեռական օրգանների քաղցկեղ:</p> <p>Cervix- արգանդի վզիկ Anus- սրբան Vagina- Վագինա Vulva- Վուլվա Penis- պենիս Oropharynx-</p>
5.	<p>A person who is sexually active can be infected by at least one of 100 types of HPV in his lifetime and do not know about that.</p> <p>Սեռական կյանքով ապրող անձն իր կյանքի ընթացքում կարող է վարակվել ՄՊՎ 100 տեսակներից որևէ մեկով և չիմանալ այդ մասին:</p>
6.	<p>Some of the HPV types do not cause any symptoms and require no treatment.</p> <p>ՄՊՎ որոշ տեսակներ չեն առաջացնում որևէ ախտանշան և բուժում չեն պահանջում:</p>
7.	<p>Using condoms during intercourse do not provide enough protection against HPV infection as skin epithelium contact at genital area can also spread the infection.</p> <p>Սեռական հարաբերության ժամանակ պահպանակի օգտագործումը չի ապահովում բավարար պաշտպանվածություն ՄՊՎ-ից, քանի որ այն կարող է փոխանցվել նաև մաշկ-մաշկ շփման միջոցով: (+can cause genital warts)</p>
8.	<p>Around 250 cases of cervical cancer are being diagnosed every year in Armenia.</p> <p>Հայաստանում տարեկան ախտորոշվում է միջինը մոտ 250 արգանդի վզիկի դեպք:</p>
9.	<p>In 2018, cervical cancer was the 2nd most common cancer among reproductive women aged 15 to 44 years,</p>

	<p>2018 թ.-ին արգանդի վզիկի քաղցկեղը 2-րդ ամենատարածված քաղցկեղն էր վերարտադրողական տարիքի (15-44 տարեկան) կանանց շրջանում:</p>
10.	<p>and the 8th leading cause of morbidity of any cancer among the female population in Armenia.</p> <p>և Հայաստանում կանանց շրջանում քաղցկեղով հինադասության 8-րդ առաջատար պատճառը:</p>
11.	<p>It is estimated that the incidences of cervical cancer in Armenia is around 8.4 per 100,000 women, second highest in the region, following 9.8 in Georgia.</p> <p>Գնահատվել է, որ Հայաստանն ունի տարածաշրջանում արգանդի վզիկի քաղցկեղի 2-րդ ամենաբարձր ցուցանիշը (8.4 դեպք 100000 կնոջ հաշվարկով) Վրաստանից հետո (9.8)</p>
12.	<p>These statistics put around 1.2 million women of reproductive age in Armenia at risk. And no women should be left unnoticed.</p> <p>Այս վիճակագրությունը տարեկան ռիսկի է ենթարկում 1.2 մլն վերարտադրողական տարիքի կնոջ, և ոչ մի կին չպետք է անուշադրության մատնվի:</p>
13.	<p>An effective vaccine has been developed to fight against HPV and protect women and men before they get infected from the virus.</p> <p>Ստեղծվել է արդյունավետ պատվաստանյութ, որը պայքարում է ՄՊՎ դեմ և պաշտպանում է կանանց և տղամարդկանց ՄՊՎ-ից:</p>
14.	<p>The importance of HPV vaccination has been realized by the Government of Armenia like governments of many countries and has introduced routine HPV vaccination for 13-year-old girls.</p> <p>Ինչպես շատ երկրներում, Հայաստանի կառավարությունը ևս գիտակցել է պատվաստման կարևորությունը և ՄՊՎ-ի դեմ պատվաստումը 13 տարեկան աղջիկների շրջանում ներառել պատվաստումների ազգային օրացույցում:</p>
15.	<p>The vaccine is produced by MERCK company in USA and is used in 85 countries.</p> <p>Պատվաստանյութն արտադրվում է ամերիկյան «Մերկ» ընկերության կողմից և կիրառվում է 85 երկրում:</p>
16.	<p>HPV vaccine can protect an individual from nine of the most common types of HPV. Other types of HPV are not commonly seen.</p> <p>ՄՊՎ դեմ պատվաստումը կարող է պաշտպանել ամենահաճախ հանդիպող քաղցկեղածին ՄՊՎ տեսակներից: Մնացած տեսակները հազվադեպ են հանդիպում:</p>
17.	<p>Many healthcare professionals recommend vaccinating against HPV.</p> <p>Բուժաշխատողները խորհուրդ են տալիս պատվաստվել ՄՊՎ-ի դեմ:</p>
18.	<p>It is the duty of parents to take care of the child and be responsible in initiating the concern over their sexual health.</p> <p>Ծնողների պարտականությունն է հոգս տանել իրենց երեխաների մասին և լինել պատասխանատու՝ մտահոգվելով նրանց սեռական առողջության համար:</p>

19.	<p>Don't believe the rumors. They prove no use. There are no evidences of HPV vaccine causing infertility or cancer.</p> <p>Մի՛ հավատացեք ասեկոսեներին. Չկա որևէ ապացույց, որ ՄՊՎ-ի դեմ պատվաստումը կարող է առաջացնել անպտղություն կամ քաղցկեղ:</p>
20.	<p>HPV vaccine only causes normal reaction like any other vaccine.</p> <p>ՄՊՎ-ի դեմ պատվաստումից հետո կարող են լինել սպասվելիք ռեակցիաներ, ինչպես ցանկացած այլ պատվաստումից հետո:</p>
21.	<p>It is recommended to vaccinate against HPV before the individual becomes sexually active.</p> <p>ՄՊՎ-ի դեմ պատվաստումն առավել արդյունավետ է 9-14 տարեկանում:</p>
22.	<p>Three doses of HPV vaccine are recommended to develop sufficient immunity against HPV.</p> <p>Լիարժեք պաշտպանվածություն ունենալու նպատակով 9-14 տարեկան անձանց խորհուրդ է տրվում ՄՊՎ-ի դեմ 2 դեղաչափ պատվաստում, իսկ 15 տարեկան և բարձր տարիքի անձանց՝ 3 դեղաչափ:</p>

Appendix J. Survey instrument (English version)

1

Q. no. _____

Pre-test questionnaire for participants

Improving Knowledge, Beliefs and Intent to Vaccinate Against Human Papilloma Virus Among Parents of School Girls in Yerevan, Armenia: A Multimedia Health Education Intervention

Instruction to the respondent

These instructions will help you to complete the questionnaire.

Dear participant, please read each question and the response options carefully. Only choose the option that best represents your response by checking (✓) the box given next to the option.

Some questions should be answered by words or by a number. For these questions, please write your response on the blank line provided near the question.

Note that some questions may look like others, but each one is different. Please try to answer all the questions.

DEMOGRAPHIC QUESTIONS

1. Who is completing the questionnaire? Please mention how you are related to your child.
 - a) Mother
 - b) Father
 - c) Guardian (e.g. Grandparent)

2. What is your age? _____

3. Please provide your marital status.
- a) Married
 - b) Divorced
 - c) Widowed
 - d) Never married
 - e) Single parent
 - f) Other
4. What is your level of education?
- a) Secondary school
 - b) High school
 - c) College/secondary professional
 - d) University/Institute
 - e) Post-graduate/doctoral
5. What is your employment status?
- a) Employed
 - b) Self-employed
 - c) Unemployed
 - d) Other
6. What is the monthly spending of your family (in AMD)?
- a) Less than 50,000
 - b) 51,000 to 100,000
 - c) 101,000 to 200,000
 - d) 201,000 to 300,000
 - e) More than 301,000
 - f) I don't want to answer
7. Please mention the age (in years) & sex (Male/female) of your child/children:
- i. Child 1: age ____; sex ____
 - ii. Child 2: age ____; sex ____
 - iii. Child 3: age ____; sex ____

8. On average, how often do you drink alcoholic beverages?
- a) Never
 - b) Less than once a week
 - c) One to three times a week
 - d) Four or more times a week
 - e) Daily
9. On average, how many cigarettes did you usually smoke in the last 30 days?
- a) Never
 - b) 1-5 cigarettes per day
 - c) 5-10 cigarettes per day
 - d) 10-20 cigarettes per day
 - e) More than 20 cigarettes per day
10. How often do you undergo a general health checkup?
- a) Never
 - b) Once every 2 years or less
 - c) Once every 2-5 years
 - d) More than 5 years
11. Have you vaccinated your child with childhood vaccinations following the childhood vaccination schedule as approved by the Republic of Armenia?
- i. Yes, I have vaccinated my child with all of the recommended childhood vaccinations.
 - ii. No, I did not vaccinate my child with some of recommended vaccines. Because, _____
12. In question 1, if you have chosen option (a), that is, if you are the mother of the child, please answer the following question, or else, skip to the HPV and HPV vaccine question section.
- How often do you give a Pap smear test?
- a) Never
 - b) Once every 3 years or less
 - c) Once every 3-5 years
 - d) Once every 5 years

HPV & HPV VACCINE QUESTIONS

KNOWLEDGE

The questions in this section are about your knowledge about Human papillomavirus and Human papillomavirus vaccine.

	True	False	I don't know
13.HPV is the most common type of STD, more common than HIV/AIDS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.HPV infection always has visible signs or symptoms.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.There is only one type of HPV.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.HPV is transmitted only through intercourse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.HPV causes only cancer of cervix.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.HPV can also cause genital warts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.HPV can affect only females.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.Having many sexual partners increases the risk of getting HPV.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.Most of sexually active people will get HPV at some point in their lives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.A person could have HPV for many years without knowing it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.HPV infection can be prevented only by vaccination.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.HPV vaccine is most effective only when is given to individual before being sexually active.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	True	False	I don't know
25. The HPV vaccines are most effective if given to people before contracting HPV infection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. HPV vaccine is effective in preventing only cervical cancer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BELIEF

The questions in this section are your beliefs about Human papillomavirus and Human papillomavirus vaccine.

	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
27. I think condoms can protect against HPV.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
28. I feel HPV vaccine is unsafe.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
29. I feel HPV vaccine may cause some serious health problems like infertility, cancer.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
30. One dose of HPV vaccine is enough to develop immunity.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
31. The HPV vaccine protects from every type of HPV.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
32. HPV vaccine can cure HPV infection.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
33. At this moment, I feel uncomfortable talking to my child about sexual health.	1	2	3	4	5

INTENT TO VACCINATE AGAINST HPV

The questions in this section are about your intention to vaccinate your child against Human papillomavirus.

	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
34. I intend to vaccinate my child against HPV.	1	2	3	4	5
35. I will discuss about HPV vaccination with my spouse/partner.	1	2	3	4	5

2

Post-test questionnaire for participants

Instruction to the respondent

These instructions will help you to complete the questionnaire.

Dear participant, please read each question and the response options carefully. Only choose the option that best represents your response by checking (✓) the box given next to the option.

Some questions should be answered by words or by a number. For these questions, please write your response on the blank line provided near the question.

Note that some questions may look like others, but each one is different. Please try to answer all the questions

HPV & HPV VACCINE QUESTIONS

KNOWLEDGE

The questions in this section are about your knowledge about Human papillomavirus and Human papillomavirus vaccine.

	True	False	I don't know
1. HPV is the most common type of STD, more common than HIV/AIDS.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. HPV infection always has visible signs or symptoms.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. There is only one type of HPV.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. HPV is transmitted only through intercourse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. HPV causes only cancer of cervix.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. HPV can also cause genital warts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. HPV can affect only females.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Having many sexual partners increases the risk of getting HPV.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Most of sexually active people will get HPV at some point in their lives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. A person could have HPV for many years without knowing it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11.HPV infection can be prevented only by vaccination.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.HPV vaccine is most effective only when is given to individual before being sexually active.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.The HPV vaccines are most effective if given to people before contracting HPV infection.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.HPV vaccine is effective in preventing only cervical cancer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BELIEF

The questions in this section are your beliefs about Human papillomavirus and Human papillomavirus vaccine.

	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
15. I think condoms can protect against HPV.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
16.I feel HPV vaccine is unsafe.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
17.I feel HPV vaccine may cause some serious health problems like infertility, cancer.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
18.One dose of HPV vaccine is enough to develop immunity.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
19.The HPV vaccine protects from every type of HPV.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

20.HPV vaccine can cure HPV infection.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
21.At this moment, I feel uncomfortable talking to my child about sexual health.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

INTENT TO VACCINATE AGAINST HPV

The questions in this section are about your intention to vaccinate your child against Human papillomavirus.

	Strongly Disagree	Moderately Disagree	Neither Disagree nor Agree	Moderately Agree	Strongly Agree
22.I intend to vaccinate my child against HPV.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
23.I will discuss about HPV vaccination with my spouse/partner.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

QUALITY OF INTERVENTION (Post-test only)

24.If you have chosen ‘1 Strongly disagree’ or ‘2 Moderately disagree’ to question 22, please mention why?

	Strongly Disagree	Moderately Disagree	Moderately Agree	Strongly Agree
25.If my healthcare provider recommends HPV vaccination.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

for my child, I would vaccinate my child against HPV.				
---	--	--	--	--

	Very bad	Bad	Neutral	Good	Very good
26. The quality of the intervention is:	1	2	3	4	5

27. Any suggestions to improve the intervention?

Appendix K. Survey instrument (Armenian version)

1

Q. no. _____

Մասնակիցների նախաձրագրային հարցաշար

Մարդու պապիլոմա վիրուսի դեմ պատվաստումներ կատարելու վերաբերյալ գիտելիքների, համոզմունքների և մտադրությունների բարելավում ծնողների շրջանում

Առողջապահական կրթական դասընթաց

Հարցաթերթիկի լրացման ցուցումներ

Այս ցուցումները կօգնեն Ձեզ լրացնել հարցաշարը

Հարգելի՛ մասնակից, ուշադիր կարդացեք ստորև ներկայացված յուրաքանչյուր հարցի և պատասխանների տարբերակները: Ընտրեք այն տարբերակը, որը ճիշտ եք համարում՝ նշելով (✓) Ձեր նախընտրած տարբերակի կողքին դրված վանդակում:

Որոշ հարցերին պետք է պատասխանել բառերով կամ թվերով: Այդ հարցերին հաջորդում են դատարկ տողեր, որպեսզի Դուք գրեք Ձեր պատասխանը:

Որոշ հարցեր կարող են նման լինել, սակայն դրանցից յուրաքանչյուրը տարբեր է: Խնդրում ենք պատասխանել բոլոր հարցերին:

Ժողովրդագրական հարցեր

1. Ո՞վ է լրացնում հարցաթերթիկը: Խնդրում ենք նշել, թե ի՞նչ բարեկամական կապ ունեք երեխայի հետ

- (1) մայր
- (2) հայր
- (3) խնամակալ (օրինակ՝ տատիկը)

2. Խնդրում ենք նշել Ձեր տարիքը _____

3. Խնդրում ենք նշել Ձեր ամուսնական կարգավիճակը

- (1) Ամուսնացած
- (2) Ամուսնալուծված

- (3) Այրի/Ամուրի
- (4) Չամուսանցած
- (5) Միայնակ ծնող
- (6) Այլ _____

4. Ի՞նչ կրթություն ունեք

- (1) միջնակարգ դպրոց (9 տարի կամ ավելի քիչ)
- (2) ավագ դպրոց (10 ից 12 տարի)
- (3) քոլեջ /միջնակարգ մասնագիտական
- (4) համալսարան/ինստիտուտ
- (5) հետդիպլոմային /ասպիրանտուրա, դոկտորանտուրա

5. Աշխատանքային ի՞նչ կարգավիճակ ունեք

- (1) Աշխատող
- (2) Ինքնազբաղված
- (3) Գործազուրկ
- (4) Այլ _____

6. Որքա՞ն գումար է ամսական միջին հաշվով ծախսում ձեր ընտանիքը (<< դրամով)

- (1) 50,000 դրամից պակաս
- (2) 51,000 - 100,000 դրամ
- (3) 101,000 - 200,000 դրամ
- (4) 201,000 - 300,000 դրամ
- (5) 301,000 դրամից ավել
- (6) Չեմ ցանկանում պատասխանել

7. Նշեք ձեր երեխայի / երեխաների տարիքը և սեռը (արական / իգական)

- i. Երեխա 1: ____ տարեկան; ____ սեռ
- ii. Երեխա 2: ____ տարեկան; ____ սեռ
- iii. Երեխա 3: ____ տարեկան; ____ սեռ

8. Միջինում, որքան հաճախ եք խմում ոգելից խմիչքներ

- (1) Երբեք
- (2) Շաբաթը մեկ անգամից պակաս
- (3) Շաբաթը մեկից երեք անգամ
- (4) Շաբաթը չորս կամ ավելի անգամ
- (5) Ամեն օր

9. Միջինում, վերջին 30 օրվա ընթացքում քանի՞ անգամ եք ծխել

- (1) Երբեք
- (2) Օրական 1-5 անգամ
- (3) Օրական 5-10 անգամ
- (4) Օրական 10-20 անգամ
- (5) Օրական ավելի քան 20 անգամ

10. Որքա՞ն հաճախ եք անցնում առողջության ընդհանուր ստուգում

- (1) Երբեք
- (2) 2 տարին մեկ անգամ կամ պակաս
- (3) 2-5 տարին մեկ անգամ
- (4) Ավելի քան 5 տարին մեկ անգամ

11. Արդյո՞ք Դուք պատվաստել եք Ձեր երեխային մանկական տարիքում՝ հետևելով պատվաստումների ազգային օրացույցին, որն ընդունված է ՀՀ կառավարության կողմից

- (1) Այո, իմ երեխան ստացել է բոլոր ցուցված պատվաստումները
- (2) Ոչ, իմ երեխան չի ստացել բոլոր ցուցված պատվաստումները, որովհետև

12. Եթե առաջին հարցում ընտրել եք (1) տարբերակը, այսինքն Դուք մայրն եք, խնդրում ենք պատասխանել հետևյալ հարցերին: Հակառակ դեպքում անցեք ՄՊՎ-ին և ՄՊՎ պատվաստմանը վերաբերող հարցերին

Ինչ պարբերականությամբ եք անցել ՊԱՊ քսուկի հետազոտություն

- (1) Երբեք չեմ անցել
- (2) Ավելի քիչ քան 3 տարին մեկ
- (3) 3-ից 5 տարին մեկ
- (4) Ավելի քան 5 տարին մեկ անգամ

Մարդու պապիլոմավիրուսին (ՄՊՎ) և ՄՊՎ-ի դեմ պատվաստումներին վերաբերող հարցեր

Գիտելիքներ

Այս բաժնում ընդգրկված հարցերը վերաբերում են մարդու պապիլոմավիրուսին և մարդու պապիլոմավիրուսի դեմ պատվաստման վերաբերյալ Ձեր համոզմունքներին

	Ճիշտ է	Միայն է	Չգիտեմ
13. Մարդու պապիլոմավիրուսը սեռական ճանապարհով փոխանցվող ինֆեկցիաներից ամենատարածվածն է, ավելի հաճախ հանդիպող, քան մարդու իմունաանբավարարության վիրուսը (ՄԻԱՎ / ՁԻԱՀ-ը):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Մարդու պապիլոմավիրուսով առաջացած վարակը միշտ ունենում է տեսանելի նշաններ կամ ախտանիշներ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Գոյություն ունի մարդու պապիլոմավիրուսի միայն մեկ տեսակ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Մարդու պապիլոմավիրուսը փոխանցվում է միայն սեռական ճանապարհով:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Մարդու պապիլոմավիրուսը առաջացնում է միայն արգանդի վզիկի քաղցկեղ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Ճիշտ է	Միայն է	Չգիտեմ
18. Մարդու պապիլոմավիրուսը կարող է առաջացնել նաև սեռական օրգանների գորտնուկներ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Մարդու պապիլոմավիրուսը կարող է ախտահարել միայն կանանց:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Մարդու պապիլոմավիրուսով վարակվելու ռիսկը մեծանում է բազմաթիվ սեռական գուգրնկերներ ունեցողների մոտ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Սեռական ակտիվ կյանք վարող մարդիկ վաղ թե ուշ վարակվում են մարդու պապիլոմավիրուսով :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Անձը կարող է վարակված լինել մարդու պապիլոմավիրուսով երկար տարիներ՝ չիմանալով դրա մասին:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Մարդու պապիլոմավիրուսով վարակը հնարավոր է կանխարգելել միայն պատվաստումների միջոցով:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Մարդու պապիլոմավիրուսի դեմ պատվաստումը առավել արդյունավետ է, երբ կատարվում է մինչ սեռական կյանքով ապրելու սկիզբը:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Մարդու պապիլոմավիրուսի դեմ պատվաստումը ավելի արդյունավետ է, եթե կատարվում է նախքան վիրուսով վարակվելը:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Մարդու պապիլոմավիրուսի դեմ պատվաստումը արդյունավետ է միայն արգանդի վզիկի քաղցկեղի կանխարգելման համար:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Համոզմունքներ

Այս բաժնում ընդգրկված հարցերը վերաբերում են ՄՊՎ- ի և ՄՊՎ- ի դեմ պատվաստումների վերաբերյալ ձեր համոզմունքներին:

	Ամենևին համաձայն չեմ	Համաձայն չեմ	Ո՛չ համաձայն եմ, ո՛չ էլ համաձայն չեմ	Համաձայն եմ	Լիովին համաձայն եմ
27. Ես կարծում եմ, որ պահպանակները կարող են պաշտպանել անձին մարդու պապիլոմավիրուսով վարակվելուց:	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
28. Ես կարծում եմ, որ մարդու պապիլոմավիրուսի դեմ պատվաստանյութն անվտանգ չէ:	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
29. Ես կարծում եմ, որ մարդու պապիլոմավիրուսի դեմ պատվաստանյութը կարող է առաջացնել առողջական լուրջ խնդիրներ, ինչպիսիք են անպտոությունը և քաղցկեղը:	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
30. Մարդու պապիլոմավիրուսի դեմ պատվաստանյութի մեկ դոզան բավարար է	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

	Ամենևին համաձայն չեմ	Համաձայն չեմ	Ո՛չ համաձայն եմ, ո՛չ էլ համաձայն չեմ	Համաձայն եմ	Լիովին համաձայն եմ
իմունիտետի առաջացման համար:					
31. Մարդու պապիլոմավիրուսի դեմ պատվաստանյութը պաշտպանում է մարդու պապիլոմավիրուսի բոլոր տեսակներից:	1	2	3	4	5
32. Մարդու պապիլոմավիրուսի դեմ պատվաստանյութը կարող է բուժել պապիլոմավիրուսով առաջացած վարակը:	1	2	3	4	5
33. Այս պահին ես անհարմար եմ զգում իմ երեխայի հետ խոսել սեռական առողջության մասին:	1	2	3	4	5

ՄԳՎ-ի դեմ պատվաստելու մտադրությունը

*Այս բաժնում ընդգրկված հարցերը առնչվում են ձեր երեխային ՄԳՎ-ի դեմ պատվաստելու
Ձեր մտադրության հետ*

	Ամենևին համաձայն չեմ	Համաձայն չեմ	Ո՛չ համաձայն եմ, ո՛չ էլ համաձայն չեմ	Համաձայն եմ	Լիովին համաձայն եմ
34. Ես մտադիր եմ պատվաստել իմ երեխային մարդու պապիլոմավիրուսի դեմ:	1	2	3	4	5
35. Ես կքննարկեմ մարդու պապիլոմավիրուսի պատվաստման հարցը իմ ամուսնու / զուգընկերոջ հետ:	1	2	3	4	5

2

Մասնակիցների հետծրագրային հարցաշար

Մարդու պապիլոմա վիրուսի դեմ պատվաստումներ կատարելու վերաբերյալ գիտելիքների, համոզմունքների և մտադրությունների բարելավում ծնողների շրջանում

Առողջապահական կրթական դասընթաց

Հարցաթերթիկի լրացման ցուցումներ

Այս ցուցումները կօգնեն Ձեզ լրացնել հարցաշարը

Հարգելի՛ մասնակից, ուշադիր կարդացեք ստորև ներկայացված յուրաքանչյուր հարցի և պատասխանների տարբերակները: Ընտրեք այն տարբերակը, որը ճիշտ էք համարում՝ նշելով (✓) Ձեր նախընտրած տարբերակի կողքին դրված վանդակում:

Որոշ հարցերին պետք է պատասխանել բառերով կամ թվերով: Այդ հարցերին հաջորդում են դատարկ տողեր, որպեսզի Դուք գրեք Ձեր պատասխանը:

Որոշ հարցեր կարող են նման լինել, սակայն դրանցից յուրաքանչյուրը տարբեր է: Խնդրում ենք պատասխանել բոլոր հարցերին:

Մարդու պապիլոմավիրուսին (ՄՊՎ) և ՄՊՎ-ի դեմ պատվաստումներին վերաբերող հարցեր

Գիտելիքներ

Այս բաժնում ընդգրկված հարցերը վերաբերում են մարդու պապիլոմավիրուսին և մարդու պապիլոմավիրուսի դեմ պատվաստման վերաբերյալ Ձեր համոզմունքներին

	Ճիշտ է	Միայն է	Չգիտեմ
1. Մարդու պապիլոմավիրուսը սեռական ճանապարհով փոխանցվող ինֆեկցիաներից ամենատարածվածն է, ավելի հաճախ հանդիպող, քան մարդու իմունասանբավարարության վիրուսը (ՄԻԱՎ / ՁԻԱՀ-ը):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Մարդու պապիլոմավիրուսով առաջացած վարակը միշտ ունենում է տեսանելի նշաններ կամ ախտանիշներ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Գոյություն ունի մարդու պապիլոմավիրուսի միայն մեկ տեսակ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Մարդու պապիլոմավիրուսը փոխանցվում է միայն սեռական ճանապարհով:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Մարդու պապիլոմավիրուսը առաջացնում է միայն արգանդի վզիկի քաղցկեղ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Մարդու պապիլոմավիրուսը կարող է առաջացնել նաև սեռական օրգանների գորտնուկներ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Մարդու պապիլոմավիրուսը կարող է ախտահարել միայն կանանց:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Մարդու պապիլոմավիրուսով վարակվելու ռիսկը մեծանում է բազմաթիվ սեռական գուգրնկերներ ունեցողների մոտ:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Սեռական ակտիվ կյանք վարող մարդիկ վաղ թե ուշ վարակվում են մարդու պապիլոմավիրուսով :	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Ճիշտ է	Միայն է	Չգիտեմ
10. Անձը կարող է վարակված լինել մարդու պապիլոմավիրուսով երկար տարիներ՝ չինանալով դրա մասին:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Մարդու պապիլոմավիրուսով վարակը հնարավոր է կանխարգելել միայն պատվաստումների միջոցով:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Մարդու պապիլոմավիրուսի դեմ պատվաստումը առավել արդյունավետ է, երբ կատարվում է մինչ սեռական կյանքով ապրելու սկիզբը:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Մարդու պապիլոմավիրուսի դեմ պատվաստումը ավելի արդյունավետ է, եթե կատարվում է նախքան վիրուսով վարակվելը:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Մարդու պապիլոմավիրուսի դեմ պատվաստումը արդյունավետ է միայն արգանդի վզիկի քաղցկեղի կանխարգելման համար:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Համոզմունքներ

Այս բաժնում ընդգրկված հարցերը վերաբերում են ՄՊՎ- ի և ՄՊՎ- ի դեմ պատվաստումների վերաբերյալ ձեր համոզմունքներին:

	Ամենևին համաձայն չեմ	Համաձայն չեմ	Ո՛չ համաձայն եմ, ո՛չ էլ համաձայն չեմ	Համաձայն եմ	Լիովին համաձայն եմ
15. Ես կարծում եմ, որ պահպանակները կարող են պաշտպանել անձին մարդու պապիլոմավիրուսով վարակվելուց:	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

	Ամենևին համաձայն չեմ	Համաձայն չեմ	Ո՛չ համաձայն եմ, ո՛չ էլ համաձայն չեմ	Համաձայն եմ	Լիովին համաձայն եմ
16. Ես կարծում եմ, որ մարդու պապիլոնավիրուսի դեմ պատվաստանյութն անվտանգ չէ:	1	2	3	4	5
17. Ես կարծում եմ, որ մարդու պապիլոնավիրուսի դեմ պատվաստանյութը կարող է առաջացնել առողջական լուրջ խնդիրներ, ինչպիսիք են անպտղությունը և քաղցկեղը:	1	2	3	4	5
18. Մարդու պապիլոնավիրուսի դեմ պատվաստանյութի մեկ դոզան բավարար է իմունիտետի առաջացման համար:	1	2	3	4	5
19. Մարդու պապիլոնավիրուսի դեմ պատվաստանյութը պաշտպանում է մարդու պապիլոնավիրուսի բոլոր տեսակներից:	1	2	3	4	5
20. Մարդու պապիլոնավիրուսի դեմ պատվաստանյութը	1	2	3	4	5

	Ամենևին համաձայն չեմ	Համաձայն չեմ	Ո՛չ համաձայն եմ, ո՛չ էլ համաձայն չեմ	Համաձայն եմ	Լիովին համաձայն եմ
կարող է բուժել պապիլոմավիրուսով առաջացած վարակը:					
21. Այս պահին ես անհարմար եմ զգում իմ երեխայի հետ խոսել սեռական առողջության մասին:	1	2	3	4	5

ՄԳՎ-ի դեմ պատվաստելու մտադրությունը

Այս բաժնում ընդգրկված հարցերը ստնչվում են ձեր երեխային ՄԳՎ-ի դեմ պատվաստելու Ձեր մտադրության հետ

	Ամենևին համաձայն չեմ	Համաձայն չեմ	Ո՛չ համաձայն եմ, ո՛չ էլ համաձայն չեմ	Համաձայն եմ	Լիովին համաձայն եմ
22. Ես մտադիր եմ պատվաստել իմ երեխային մարդու պապիլոմավիրուսի դեմ:	1	2	3	4	5
23. Ես կքննարկեմ մարդու պապիլոմավիրուսի պատվաստման հարցը իմ ամուսնու / զուգընկերոջ հետ:	1	2	3	4	5

Միջամտության որակը(միայն հետ-թեստային)

Այս բաժնում ընդգրկված հարցերը վերաբերում են սույն միջամտության որակի վերաբերյալ Ձեր կարծիքին

24. Եթե 22-րդ հարցին Դուք պատասխանել եք «1. Ամեննին համաձայն չեմ» կամ «2. Համաձայն չեմ», խնդրում ենք նշել, թե ինչու:

	Ամեննին համաձայն չեմ	Համաձայն չեմ	Համաձայն եմ	Լիովին համաձայն եմ
25. Եթե իմ բժիշկը խորհուրդ տա պատվաստել երեխային մարդու պապիլոմավիրուսի դեմ, ես իմ երեխային կպատվաստեմ:	1	2	3	4

	Շատ վատ	Վատ	Ո՛չ լավ, ո՛չ էլ վատ	Լավ	Շատ լավ
26. Միջամտության որակը էր	1	2	3	4	5

27. Միջամտության բարելավելու համար որևէ առաջարկություններ ունե՞ք:

Appendix L. Interviewer manual

Improving Knowledge, Beliefs and Intent to Vaccinate Against Human Papilloma Virus Among Parents of School Girls in Yerevan, Armenia: A Multimedia Health Education Intervention

Master thesis project by Rohith Sharan Sankaran

Interviewer Manual

1. Introduction

This interviewer manual depicts the role and function of the assistant who will be assisting the student researcher in conducting the study at the selected schools. The assistant will help in setting up the field and facilitate the data collection. The data collection will be held at two randomly selected schools in Yerevan, Armenia, after obtaining permission from the Yerevan municipality. Thus, the following duties are to be performed twice, once at each school. The researcher will be present at every stage of the study and could be approached to clarify any questions regarding the project.

2. Visiting the school and establishing contact with the parents

- The researcher and the assistant will visit the selected schools on a decided day to meet the school director of the respective schools.
- The study will be explained to the headmaster and will be further requested to provide list of students from grades 4 to 9. Only female students aged between 9 and 14 will be taken to form a list, and randomly select 22 students, whose parents will be approached.
- The invitation will be provided to the students to be given to their parents for participation in the study.
- The student researcher will ensure that 22 eligible parents were identified and were informed about the day and time of the intervention.
- The parents will be called by the student researcher and assistant two days prior to the meeting at school to remind about the date and time.

3. Entering the field and commencement of the study

- On the day of the intervention, the assistant, along with the researcher, will guide the participants to be seated comfortably in the selected room at the school.
- The researcher and the assistant will welcome the participants and explain the sequence of activities that are going to be followed during the day.
- The researcher and the assistant will hand over the envelopes containing the consent form and both pre-test and post-test questionnaires to the participants.

- The participants will be asked to read the consent form and sign it at the bottom, in order to continue with the day's activities.
- After obtaining the consent, the participants will be asked to start answering the pre-test questionnaire.

4. Conducting the data collection

4.1 Pre-test data collection

- The pre-test data will be collected by a questionnaire which includes questions on demographic characteristics of the participants.
- The assistant will be checking the questionnaire to make sure the participants answer the pre-test questionnaire and not the post-test questionnaire. Also, informing the participants to be aware of answering all the questions.
- The questionnaires are self-administered. The assistant should NOT aid the participants in answering the questions and only can explain the query to make sure that the participant understands the question and reflect his/her own opinion.
- After the participants complete the pre-test, the assistant and the researcher will review the completed questionnaires to check whether all questions were answered and place them inside the envelope.
- A short film about Human Papillomavirus will be screened for the participants.

4.2 Post-test data collection

- After the film ends, the participants can take a quick break if necessary, and proceed with answering the post-test questionnaire.
- The post-test data will be collected by a separate questionnaire, which does not include questions on demographic characteristics.
- The assistant will be informing the participants to be aware of answering all the questions in the questionnaire. It can be expected that the participants will come up with fewer queries than during the pre-test data collection as the post-test questions are the same as the pre-test.
- The post-test questionnaires are self-administered as well. The assistant should not aid the participants in answering the questions and only can explain the query to make sure that the participant understands the question and reflect his/her own opinion.
- After the participants complete the post-test, the assistant and the researcher will review the completed questionnaire to check whether all questions were answered and place them inside the envelope.

5. Conclusion of the day's activity

- The envelopes from the participants will be collected and put it in a bag, that will be used to transport the questionnaires for data entry.

- The participants will be thanked for their participation in the study and will be given an incentive. (Explain what the incentive is if required).
- The parents will be informed that all the activities were completed and are free to leave.

6. Ethical Considerations

During every stage mentioned above where the assistant is involved, he/she is required to abide by the ethics of research. No harm should be inflicted by any of the personnel involved/present in the field. Any issues of ethical concern should be notified to the researcher at the earliest. If the participants have questions regarding the study, please direct them to the student researcher.

Appendix M. Consent form (English version)

American University of Armenia

Turpanjian School of Public Health

Institutional Review Board # 1

Oral Consent Form

Improving Knowledge, Beliefs and Intent to Vaccinate Against Human Papilloma Virus Among Parents of School Girls in Yerevan, Armenia: A Multimedia Health Education Intervention

I, Rohith Sharan Sankaran, a second-year master of public health student at the Turpanjian School of Public Health of American University of Armenia, invite you to participate in my study which is part of my final, capstone project.

You are being contacted as you fulfill the inclusion criteria of being a parent and having at least one daughter aged 9 to 14 years old studying in one of the randomly selected school in Yerevan, Armenia and that you have not vaccinated your daughter against Human Papilloma Virus (HPV). The parents of school going children are selected as they are the decision-makers of their child's vaccine status. We are planning to approach 44 parents to participate in the study.

This is a health education study, where the health education is provided through a 10-minute short film. Changes in your knowledge, belief and intention to vaccinate your daughter will be assessed before and after the film. After giving your consent to participate in this study, you are required to complete the baseline questionnaire. Then a 10-minute a short-film will be screened, followed by a post-test questionnaire with the same questions. The total duration of the intervention and answering the questions will be no more than 1 hour and 15 minutes and you will not be invited for any follow-up related to this study.

There is no known risk in participation in this study and no information that could identify you will be collected. Participants will be assigned random participant numbers and your name will not be noted on any forms.

The collected data will be entered into electronic data analysis program and will be used only for this study. The data will only be accessed by the study team. After the data analysis, the survey questionnaires containing your responses will be destroyed.

Your participation in this study is voluntary and confidential. There is no consequence to you, if you choose to withdraw at any time from the study. If you feel uncomfortable to answer any question, please feel free to skip the question. Your contributions to this study will help us to produce informative data on improving the current vaccination rates against HPV and ways to increase knowledge on HPV, which may, consequently, decrease cervical cancer rates in

Armenia. I very much appreciate your participation in my study. You receive a learning opportunity by contributing in the study, and a small incentive for your participation.

If you have questions related to this study you can contact the dean of Turpanjian School of Public Health Dr. Varduhi Petrosyan +374 60 61 25 92. If you feel that you were treated unfairly or harmed in any way please contact Varduhi Hayrumyan, the Human Protections Administrator of the American University of Armenia +374 60 61 25 61.

I have read the consent form and I agree to participate in the study in my own will.

Appendix N. Consent form (Armenian version)

**Հայաստանի ամերիկյան համալսարան
Թրփանճեան Հանրային առողջապահության ֆակուլտետ
Գիտահետազոտական էթիկայի թիվ 1 հանձնաժողով
Բանավոր իրազեկ համաձայնության ձև**

**Մարդու պապիլոմա վիրուսի դեմ պատվաստումներ կատարելու վերաբերյալ
գիտելիքների, համոզմունքների և մտադրությունների բարելավում ծնողների
շրջանում
Առողջապահական կրթական դասընթաց**

Ես՝ Ռոհիթ Շարան Սանքարան եմ, Հայաստանի ամերիկյան համալսարանի Թրփանճեան Հանրային առողջապահության ֆակուլտետի մագիստրատուրայի երկրորդ կուրսի ուսանող, հրավիրում եմ Ձեզ մասնակցելու իմ հետազոտությանը, որն իմ տարեվերջյան ավարտական աշխատանքի մասն է կազմում:

Ձեզ հետ կապվել են, քանի որ բավարարում եք հետազոտության մեջ ընդգրկվելու չափանիշներին, կապված նրա հետ, որ Դուք բնակվում եք Երևանում, և հանդիսանում եք ծնող, ով ունի առնվազն մեկ 9 ից14 տարեկան աղջիկ, ով սովորում են Երևանի պատահական ընտրված դպրոցներից մեկում և պատվաստված չէ Մարդու պապիլոմա վիրուսի դեմ: Հետազոտության համար ընտրված են դպրոցահասակ երեխաների ծնողները, քանի որ նրանք են պատասխանատու երեխաների պատվաստման համար: Մենք պլանավորում ենք դիմել 44 ծնողի՝ հետազոտությանը մասնակցելու համար:

Այս հետազոտությունը ներառում է 10 րոպե տևողությամբ կարճամետրաժ կրթական ֆիլմ : Ձեր գիտելիքների, համոզմունքների և Ձեր երեխային պատվաստելու մտադրության փոփոխությունները կգնահատվեն ֆիլմի դիտումից առաջ և հետո: Այս հետազոտությանը մասնակցելու ձեր համաձայնությունը տալուց հետո Ձեզանից կպահանջվի լրացնել ելակետային հարցաշարը: Այնուհետև կցուցադրվի 10 րոպեանոց կարճամետրաժ ֆիլմ, որին կհետևի հետծրագրային հարցաշարը: Ֆիլմի դիտումը և հարցերին պատասխանելու ընդհանուր տևողությունը կկազմի ոչ ավել, քան 1 ժամ 15 րոպե և ձեր մասնակցությունը կսահմանափակվի ֆիլմի դիտումով և հարցումով:

Ձեր մասնակցությունը այս հետազոտությանը չի պարունակում որևէ ռիսկ և Ձեր անձը բացահայտող որևէ տեղեկատվություն չի հավաքվելու: Մասնակիցներին կտրվեն պատահական համարներ, և ձեր անունը չի նշվի որևէ տեղ:

Հավաքված տվյալները մուտքագրվելու են տվյալների վերլուծության էլեկտրոնային ծրագրի մեջ և կօգտագործվեն միայն այս հետազոտության նպատակով: Տվյալները

հասանելի կլինեն միայն հետազոտական թիմին: Տվյալների վերլուծությունից հետո ձեր պատասխանները պարունակող հարցաթերթիկները կոչնչացվեն:

Ձեր մասնակցությունը այս հետազոտությանը կամավոր է և գաղտնի: Եթե Դուք որոշեք ցանկացած պահի դադարեցնել Ձեր մասնակցությունը, դա Ձեզ համար որևէ հետևանքներ չի ունենա: Եթե Դուք հարմար չեք գտնում որևէ հարցին պատասխանել, կարող եք այն բաց թողնել:

Ձեր մասնակցությունը կօգնի մեզ ստանալ տվյալներ մարդու պապիլոմա վիրուսի դեմ պատվաստումների ներկայիս մակարդակի բարելավման համար և ավելացնել գիտելիքներ մարդու պապիլոմա վիրուսի վերաբերյալ, ինչը, հետևաբար, կարող է նպաստել արգանդի պարանոցի քաղցկեղի մակարդակի կրճատմանը Հայաստանում:

Ես շատ շնորհակալ եմ իմ հետազոտությանը Ձեր մասնակցության համար և մասնակցելով հետազոտությանը՝ կստանաք փոքրիկ նվեր:

Հետազոտողության հետ կապված հարցերի դեպքում կարող եք զանգարահել Հայաստանի ամերիկյան համալսարանի Թրփանճեան Հանրային առողջապահության ֆակուլտետի դեկան՝ Վարդուհի Պետրոսյանին հետևյալ հեռախոսահամարով +374 60 61 25 92: Եթե Դուք կարծում եք, որ Ձեր նկատմամբ անարդարացի են վերաբերվել կամ Ձեզ որևէ վնաս է հասցվել, Դուք կարող եք դիմել Հայաստանի ամերիկյան համալսարանի գիտահետազոտական էթիկայի հանձնաժողովի համակարգող Վարդուհի Հայրումյանին +374 60 61 25 61 հեռախոսահամարով:

Ես կարդացել եմ սույն համաձայնության ձևը և կամավոր տալիս եմ հետազոտությանը մասնակցելու իմ համաձայնությունը: