



ANALYSIS OF PREDISPOSING, REINFORCING, AND ENABLING FACTORS ON HUMAN PAPILLOMA VIRUS (HPV) VACCINATION BEHAVIOR BASED ON GREEN'S THEORY

Linda Juwita*, Ninda Ayu Prabasari, Steven Aldo Marcello

Universitas Katolik Widya Mandala Surabaya, Jl. Raya Kalisari Selatan No 1 Pakuwon City, Surabaya, East Java 60112, Indonesia

*lindajuwita@ukwms.ac.id

ABSTRACT

Women exposed to HPV are at a higher risk of developing cervical cancer. One preventive measure is HPV vaccination, which can be administered starting at the age of >9 years. However, the motivation, willingness, and acceptance of HPV vaccination among adolescents remain relatively low. This study aims to analyze the relationship between predisposing, reinforcing, and enabling factors influencing HPV vaccination behavior in adolescent girls based on Green's theory. This research is a descriptive analytic study using a cross-sectional approach. The population consists of female adolescents from SMA Pembangunan Jaya 2. The sampling technique used is purposive sampling, targeting participants who meet the inclusion criteria. The independent variables include predisposing factors (knowledge, attitude), reinforcing factors (information sources, costs), and enabling factors (family support, peer support). The dependent variable is HPV vaccination behavior. Data were analyzed using bivariate statistical analysis with the Chi-Square test. Statistical tests on predisposing and reinforcing factors using Chi-Square revealed that knowledge (p-value: 0.097 > 0.05), attitude (p-value: 0.084 > 0.05), information sources (p-value: 0.285 > 0.05), and costs (p-value: 0.981 > 0.05). For enabling factors, parental support (p-value: 0.001 < 0.05) and peer support (p-value: 0.021 < 0.05). Predisposing and reinforcing factors do not have a significant relationship with HPV vaccination behavior, while enabling factors have a significant relationship with HPV vaccination behavior.

Keywords: adolescents; enabling; HPV vaccine; predisposing; reinforcing

How to cite (in APA style)

Juwita, L., Prabasari, N. A., & Marcello, S. A. (2025). Analysis of Predisposing, Reinforcing, and Enabling Factors on Human Papilloma Virus (HPV) Vaccination Behavior Based on Green's Theory. *Indonesian Journal of Global Health Research*, 7(1), 1169-1176. <https://doi.org/10.37287/ijghr.v7i1.5059>.

INTRODUCTION

Cervical cancer is a malignancy occurring in the cervical area of women caused by the Human Papilloma Virus (HPV) (Juwita, 2023). This disease can affect women of all ages, with younger women being at higher risk (Humaniora, 2022). An effective preventive measure to control HPV, particularly cervical cancer, is HPV vaccination, which is recommended for adolescents aged 9-13 years (Christine & Putra, 2013; Mumekh et al., 2022). However, the coverage of free HPV vaccinations in Indonesia remains relatively low, as the government's 2022 target focuses on 5th and 6th-grade elementary school students (Shalilah & Nugroho, 2022; Wantini & Indrayani, 2020). High school students (SMA) are not included in this target group, and their lack of confidence in the HPV vaccine contributes to the low vaccination rates among this age group (Rachmani et al., 2012). Adolescents in the transitional phase (aged >17 years) face an increased risk of HPV exposure, yet research shows that most high school students are unwilling to receive the HPV vaccine for various reasons (Antarsih & Kusumastuti, 2019; Dethan & Suariyani, 2017). Delayed vaccination leaves adolescents unprotected against HPV infection (Frianto et al., 2023).

Data from Globocan in 2021 reported 36,633 cervical cancer cases in Indonesia, with a rising mortality rate. The primary cause (95%) was HPV infection (Tarmizi, 2023). A 2017 study in high schools in Yogyakarta revealed that 90.1% of adolescent girls were unwilling to receive

the HPV vaccine (Arifah et al., 2017). According to the 2022 Health Protection Report, global HPV vaccination coverage among 15-year-old girls is only 20% for the first dose and 15% for the final dose (Health Protection Report, 2022). In 2019, HPV vaccination coverage in Indonesia was alarmingly low, with only 1.1% of adult women having received two doses of the vaccine. Globally, 266,000 deaths from cervical cancer occur among women aged 15-44 years annually (Rahmadini et al., 2022). A study at Dr. Soetomo General Hospital in Surabaya found that 2.1% of cervical cancer patients were aged 20-30 years, with 2.5% being unmarried (Rozi et al., 2019).

HPV vaccination is recommended for females aged 9-14 years (Menaldi & Press, 2016; Mumekh et al., 2022). However, many adolescents fail to get vaccinated due to high costs and the need for parental consent (Dethan & Suariyani, 2017). Analysis suggests that 10% of women worldwide are infected with HPV, leading to an increase in cervical cancer cases and deaths. This underscores the fact that all women are at risk of HPV infection. HPV is often found in women suffering from sexually transmitted diseases due to high-risk sexual behaviors (Damayanti, 2013). Adolescents aged >17 years are in a transitional phase both physically and psychologically toward adulthood, making them more likely to engage in sexual activities [9]. From a behavioral, biological, and cultural perspective, adolescents are a high-risk group for contracting sexually transmitted infections (Ekowati et al., 2017). Women with a history of sexually transmitted infections who are not vaccinated against HPV are at a higher risk of developing cervical cancer. Beyond the cervix, HPV can also cause anogenital cancers and genital warts in both men and women (Damayanti, 2013; Nick et al., 2021; Rasjidi, 2009).

Preventing cervical cancer involves avoiding HPV infection risk factors and receiving the HPV vaccine (Fajrin, 2019). The HPV vaccine is most effective when administered from the age of 9 years and above (Zhang et al., 2019). HPV vaccination is expected to control the progression of cancer cells. Lawrence Green categorizes health problems into behavioral and non-behavioral factors. He classifies behavioral factors into three main categories: predisposing factors (knowledge, attitudes), reinforcing factors (cost, information media), and enabling factors (family support, peer support) (Notoatmojo, 2018). To predict preventive efforts, this study aims to analyze predisposing, reinforcing, and enabling factors influencing HPV vaccination behavior in adolescent girls based on Green's theory.

METHOD

This study employed an analytical observational design with a cross-sectional approach, conducted in August 2024. The population consisted of female adolescents at SMA Pembangunan Jaya 2. The sample included female adolescents who met the inclusion criteria: aged 15-17 years, not sexually active, and willing to participate as respondents. The total sample size for this study was 71 participants.

The independent variables were:

1. Predisposing factors: knowledge, attitudes
2. Reinforcing factors: cost, information media
3. Enabling factors: family support, peer support

The dependent variable was HPV vaccination behavior.

Data collection was carried out using a questionnaire that had been tested for validity and reliability. Ethical considerations in this study included obtaining informed consent from respondents, ensuring anonymity, and maintaining confidentiality. The questionnaire used in this study was compiled by the researcher for all variables in the study. The questionnaire has been tested for validity using person product moment, the r value is 0.338 - 0.974. Cronbach's Alpha for each variable is the knowledge (0.992), attitude (0.968), parental support (0.940),

and peer support (0.674). For the costs variable, information sources and HPV vaccination behavior only consists of 1 question. Each respondent signed a consent form. The study was approved by the Ethics Committee of the Faculty of Medicine, Universitas Katolik Widya Mandala Surabaya (Ref: 0010/WM12/KEPK/DSN/T/2024). Confidentiality of the collected data was ensured, with access limited exclusively to the research team.

RESULT

Demographic Data

In this study, the results showed that most respondents were 16 years old, as many as 71 people (32.39%). Then the majority of fathers and mothers' education had a college education background with a total of 48 people (67.61%), the majority of fathers' jobs were private with a total of 34 people (39.44%), the majority of mothers' jobs were housewives with a total of 35 people (49.30%), most families had no history of cancer with a total of 61 people (85.92%), and the majority of families had never had the HPV vaccine with a total of 59 people (83.10%).

Table 1.
Demography Characteristic (n=71)

Characteristic	f	%
Age (Years)		
15	30	42,25
16	23	32,39
17	18	25,36
Father's Education		
Junior High School	1	1,41
Senior High School	20	28,17
College	50	70,42
Mother's Education		
Senior High School	23	32,39
College	48	67,61
Father's Occupation		
Private Employment	34	47,89
Entrepreneur	28	39,44
Civil Servants	9	12,68
Mother's Occupation		
Housewife	35	49,30
Private Employment	17	23,94
Entrepreneur	16	22,54
Civil Servants	3	4,23
Family History of Cancer		
Yes	10	14,08
No	61	85,92
Family History of HPV Vaccine		
Yes	12	16,90
No	59	83,10

Table 2.
Respondent Specific Data (n=71)

No	Variable	n	%
	Independent Variable		
1.	<i>Predisposing</i>		
	Knowledge		
	High	24	33,8
	Medium	26	36,6
	Low	21	29,6
	Attitude		

No	Variable	n	%
	Negative	46	64,8
	Positive	24	33,8
2.	Reinforcing		
	Information Media		
	Various Types	24	33,8
	Not Various Types	47	66,2
	HPV Vaccine Costs		
	Cheap	9	12,6
	Expensive	62	87,4
3.	Enabling		
	Family Support		
	High	37	52,2
	Low	34	47,8
	Friend Support		
	High	16	22,6
	Low	55	77,4
	Dependent Variable		
1.	HPV Vaccine Behavior		
	Negative	55	77,5
	Positive	16	22,5

Table 3.
Analysis Result (n=71)

No	Variable	HPV Vaccination				Total		p-value
		Negative		Positive		f	%	
		f	%	f	%			
1.	<i>Predisposing</i>							
	Knowledge							
	High	15	62,5	9	37,5	24	33,8	0,097
	Medium	22	84,6	4	15,4	26	36,6	
	Low	18	85,7	3	14,3	21	29,6	
	Attitude							
	Positive	21	67,7	10	32,3	31	64,7	0,084
	Negative	34	85	6	15	40	33,8	
2.	<i>Reinforcing</i>							
	Information Media							
	Various Types	18	75	6	25	24	33,8	0,285
	Not Various Types	37	78,7	10	21,3	47	66,2	
	HPV Vaccine Costs							
	Cheap	7	77,7	2	22,2	9	12,6	0,981
	Expensive	48	77,4	14	22,6	62	87,4	
3.	<i>Enabling</i>							
	Family Support							
	High	23	62,1	14	37,9	37	52,2	0,001
	Low	32	94,1	2	5,9	34	47,8	
	Friend Support							
	High	9	56,2	7	43,8	16	22,6	0,021
	Low	46	83,6	9	16,4	55	77,4	

Based on Table 3, the majority of respondents had moderate knowledge (36.6%), most were not employed (91%), and the majority exhibited positive attitudes (64.8%). Most respondents obtained information from limited sources (66.2%) and perceived the cost of the HPV vaccine as expensive (87.4%). Family support was predominantly high among respondents (52.2%), while peer support was largely low (77.4%). Statistical tests on predisposing factors (knowledge and attitude), reinforcing factors (information media and cost), and enabling

factors (family and peer support) were conducted using bivariate analysis with the Chi-Square test to determine correlations between each variable. The results showed the following:

1. Knowledge and HPV vaccination behavior: p-value = 0.097
2. Attitude and HPV vaccination behavior: p-value = 0.373
3. Information media and HPV vaccination behavior: p-value = 0.285
4. Cost and HPV vaccination behavior: p-value = 0.981
5. Family support and HPV vaccination behavior: p-value = 0.001
6. Peer support and HPV vaccination behavior: p-value = 0.021

The variables knowledge, attitude, information media, and cost had p-values > 0.05 , indicating no significant relationship with HPV vaccination behavior. In contrast, family support and peer support had p-values < 0.05 , indicating a significant relationship with HPV vaccination behavior.

DISCUSSION

This study was conducted to analyze the relationship between predisposing, reinforcing, and enabling factors influencing HPV vaccination behavior in adolescent girls based on Green's theory. The results of the data analysis showed that Predisposing and reinforcing factors do not have a significant relationship with HPV vaccination behavior, while enabling factors have a significant relationship with HPV vaccination behavior.

Predisposing factors

The predisposing factors in this study included knowledge and attitude. Statistical analysis using the Chi-Square test revealed no significant relationship between knowledge and HPV vaccination behavior. This finding aligns with research conducted in Manado, which found no correlation between knowledge and HPV vaccination participation (Ansiga et al., 2024). Another study on adolescent girls similarly concluded that knowledge was not significantly associated with willingness to receive the HPV vaccine (Indrayani, 2020). Questionnaire responses in this study showed that most respondents had moderate knowledge, yet the majority did not receive the HPV vaccine. Specifically, 63.4% of respondents provided incorrect answers regarding the benefits of the HPV vaccine. The researchers suggest that misinformation about the vaccine contributes to low HPV vaccination behavior among adolescents. This aligns with previous studies indicating that misconceptions about the vaccine's halal status, efficacy, and safety led to vaccine hesitancy (Sangadji et al., 2024).

Statistical analysis of the relationship between attitude and HPV vaccination behavior also showed no significant correlation. This result is consistent with a study conducted at a private high school, which found a p-value of 0.27, indicating no significant relationship between attitude and HPV vaccination behavior (Dethan & Suariyani, 2017). The researchers argue that a positive attitude does not necessarily translate into positive behavior. Attitude reflects a predisposition to accept or reject an action, but it is an internal response rather than an observable behavior (Juwita & Prabasari, 2023).

Reinforcing factors

The reinforcing factors in this study included information media and cost. Statistical analysis showed no significant relationship between information media and HPV vaccination behavior (p-value = 0.285). According to Notoatmodjo, while knowledge gained through sensory input can be processed and applied, it may also be passively received without understanding or implementation (Notoadmojo, 2012). Although respondents accessed various information sources, many still had insufficient knowledge and did not receive the HPV vaccine. This suggests that prior information was either misunderstood or incorrect. This observation aligns with a study in Spain, which found that unbalanced media coverage negatively impacted

vaccination programs, especially among adolescents lacking interaction with healthcare systems (Fernández et al., 2014).

Similarly, the cost of the HPV vaccine showed no significant relationship with vaccination behavior (p -value = 0.981). This finding contrasts with a review of ASEAN countries, where cost was identified as a primary determinant of HPV vaccine uptake (Rahmah et al., 2024). While 87.3% of respondents in this study perceived the vaccine as expensive, 22.5% of them had received it. Conversely, 12.7% of respondents considered the vaccine affordable, and 22.2% of them had been vaccinated. The researchers argue that cost is not the sole determinant of vaccination behavior; parental willingness to fund the vaccine plays a crucial role. This aligns with research conducted in Badung Regency, which found low parental willingness to pay for the HPV vaccine for their children (Karneli et al., 2013).

Enabling factors

The enabling factors included family and peer support. Statistical analysis showed a significant relationship between family support and HPV vaccination behavior (p -value = 0.001). The researchers suggest that parental support, particularly granting permission, is crucial for adolescents to receive the vaccine. This finding aligns with previous studies that demonstrated a significant relationship between family support and adolescent behavior in preventing cervical cancer through HPV vaccination (Fitriani et al., 2018; Rahmadani et al., 2022). Peer support also showed a significant relationship with HPV vaccination behavior (p -value = 0.021). This finding is supported by research in Surabaya, which identified peer support as a factor influencing cervical cancer prevention through HPV vaccination (Kholifatullah & Notobroto, 2023). Peer recommendations significantly impact adolescent decisions to receive the HPV vaccine. Peers influence attitudes and behaviors, particularly by sharing vaccination-related information (Hapsari, 2019; Shah et al., 2021).

CONCLUSION

This study found no significant relationship between predisposing factors (knowledge and attitude) or reinforcing factors (information sources and cost) and HPV vaccination behavior among adolescent girls. However, a significant relationship was identified between enabling factors (family support and peer support) and HPV vaccination behavior in adolescent girls.

REFERENCES

- A Ansiga, J., Purwarini, J., & Wirdani, P. (2024). Hubungan Tingkat Pengetahuan dan Dukungan Orang Tua dengan Keikutsertaan Vaksinasi HPV pada Siswa Sekolah Dasar di Manado. *Jurnal Keperawatan Cikini*, 5(1), 10–16. <https://doi.org/https://doi.org/10.55644/jkc.v5i01.150>
- Antarsih, N. R., & Kusumastuti, A. (2019). Faktor determinan perilaku pencegahan primer kanker serviks pada remaja putri. *Sel Jurnal Penelitian Kesehatan*, 6(1), 10–24.
- Arifah, K., Damayanti, W., & Sitaresmi, M. N. (2017). Kesiediaan mendapat vaksinasi human papilloma virus pada remaja putri di Yogyakarta. *Sari Pediatri*, 18(6), 430–435.
- Christine, A., & Putra, A. (2013). Penerimaan Vaksinasi Kanker Serviks Pada Siswi SMA di Kabupaten Badung Tahun 2012. *Community Health*, 1(2), 54–64.
- Damayanti, I. P. (2013). faktor-faktor yang berhubungan dengan kejadian kanker serviks di rsud arifin achmad pekanbaru tahun 2008-2010. *Jurnal Kesehatan Komunitas*, 2(2), 88–93.
- Dethan, C. M., & Suariyani, N. L. P. (2017). Pengetahuan dan Sikap Tentang Perilaku Vaksinasi HPV Pada Sisiwi SMA Swasta. *Jurnal MKMI*, 13(2), 167–175. <https://doi.org/10.30597/mkmi.v13i2.1989>
- Ekowati, D., Udiyono, A., Martini, M., & Adi, M. S. (2017). Hubungan Pengetahuan dengan

- Persepsi Mahasiswi dalam Penerimaan Vaksinasi HPV sebagai Upaya Pencegahan Kanker Serviks. *Jurnal Kesehatan Masyarakat (Undip)*, 5(4), 334–341.
- Fajrin, D. H. (2019). Hubungan Pengetahuan Remaja Putri Tentang Kanker Serviks Dengan Minat Penggunaan Vaksin Hpv. *Health Care Media*, 3(6), 45–48.
- Fernández, M. E., Le, Y. L., Fernández-espada N, Aragon, A. P., & Colón-lópez, V. (2014). Knowledge, attitudes, and beliefs about Human Papillomavirus (HPV) vaccination among Puerto Rican mothers and daughters 2010: A Qualitative Study. *Preventing Chronic Disease*, 11.
- Fitriani, Y., Mudigdo, A., & Andriani, R. B. (2018). HealthBelief Model on the Determinants of Human Papilloma Virus Vaccination in Women of Reproductive Age in Surakarta, Central Java. *Journal of Health Promotion and Behavior*, 3, 16–26.
- Frianto, D., Setiawan, D., Diantini, A., & Suwantika, A. A. (2023). Program Vaksinasi HPV di Indonesia-Jejak Pustaka. *Jejak Pustaka*.
- Hapsari, A. (2019). *Buku Ajar Kesehatan Reproduksi Modul Kesehatan Reproduksi Remaja*. Wineka Media.
- Health Protection Report. (2022). Human papillomavirus (HPV) vaccination coverage in adolescents in England: 2021 to 2022. *UK Health Security Agency*, 16(13).
- Humaniora. (2022, February). Deteksi Dini Kanker Serviks yang Menimpa Perempuan Semua Usia. *MediaIndonesia.Com*.
- Indrayani, N. A. W. N. (2020). Rendahnya Kesiediaan Vaksinasi Hpv Pada Remaja Putri. *Jurnal Kebidanan Indonesia*, 11(1), 69–78.
- Juwita, L. (2023). *Kesehatan Reproduksi dan Kesehatan Wanita* (Arif Munandar, Ed.). PT Kimshafi Alung Cipta.
- Juwita, L., & Prabasari, N. A. (2023). The Precede-Proceed Model Concept Analysis on The Uptake of Visual Inspection with Acetic Acid Method (VIA) Test. *Babali Nursing Research*, 4(3), 492–501. <https://doi.org/https://doi.org/10.37363/bnr.2023.43242>
- Karneli, N. K., Suwiyoga, K., & Sudibya, I. G. A. (2013). Kesiediaan Membayar Vaksinasi Kanker Serviks Di Sekolah Menengah Umum Kabupaten Badung. *Public Health and Preventive Medicine Archive*, 1(1), 52–57. <https://doi.org/https://doi.org/10.15562/phpma.v1i1.161>
- Kholifatullah, A. I., & Notobroto, H. B. (2023). Human Papillomavirus Sebagai Pencegahan Kanker Serviks. *Jurnal Kesehatan Tambusai*, 4(3), 3699–3707. <https://doi.org/10.31004/jkt.v4i3.17454>
- Menaldi, L. S., & Press, U. B. (2016). *Skin Infection: It's A Must Know Disease*. Universitas Brawijaya Press. <https://books.google.co.id/books?id=kYNKDwAAQBAJ>
- Mumekh, T. H. I., Bunsal, C. M., & Basso, S. (2022). Edukasi Kesehatan Vaksinasi Human Papiloma Virus (HPV) Pada Anak Sekolah Terhadap Pengetahuan Sikap Guru. *Jurnal Kesehatan Amanah*, 6(2), 10–21.
- Nick, N., Torabizadeh, C., & Ghahartars, M. (2021). Perceived supportive paradox after diagnosing human papillomavirus: a qualitative content analysis. *International Journal of Community Based Nursing and Midwifery*, 9(2), 92.
- Notoadmojo. (2012). *Promosi Kesehatan Sekolah*. Rineka Cipta.
- Notoatmojo, S. (2018). *Metodologi penelitian Kesehatan*. Rineka Cipta.
- Rachmani, B., Shaluhiah, Z., & Cahyo, K. (2012). Sikap remaja perempuan terhadap pencegahan kanker serviks melalui vaksinasi HPV di kota Semarang. *Media Kesehatan Masyarakat Indonesia*, 11(1), 34–41.
- Rahmadani, A. F., Kusmiati, M., & Sunarti. (2022). Faktor-Faktor yang Berhubungan dengan Perilaku Remaja Terhadap Pencegahan Kanker Serviks Melalui Vaksinasi HPV. *Jurnal Formil (Forum Ilmiah) KesMas Respati*, 7(3), 317–325. <http://formilkesmas.respati.ac.id>
- Rahmadini, A. F., Kusmiati, M., & Sunarti. (2022). Faktor-Faktor yang Berhubungan dengan

- Perilaku Remaja Terhadap Pencegahan Kanker Serviks Melalui Vaksinasi HPV. *Jurnal Formil (Forum Ilmiah) KesMas Respati*, 7(3), 317–325. <https://doi.org/https://doi.org/10.35842/formil.v7i3.458>
- Rahmah, B. P., Faris Naufal, M., Almerridho, V., & Modjo, R. (2024). Faktor-Faktor Yang Memengaruhi Penerimaan Vaksin Human Papillomavirus (HPV) Di Negara-Negara Asean: Literature Review. 9(5). <https://doi.org/https://doi.org/10.36418/syntax-literate.v9i4.14323>
- Rasjidi, I. (2009). Epidemiologi Kanker Serviks. *Indonesian Journal of Cancer*, III(3), 103–108.
- Rozi, A. F., Susanti, D., & Annas, J. Y. (2019). Karakteristik Pasien Kanker Serviks Di RSUD Dr. Soetomo Surabaya Periode Januari–Desember 2017. *Majalah Biomorfologi*, 29(2), 45–48.
- Sangadji, N. W., Ayu, I. M., & Veronika, E. (2024). Faktor yang Berhubungan dengan Penerimaan Vaksin HPV. *Surya Medika*, 19(1), 55–60. <https://doi.org/https://doi.org/10.32504/sm.v19i01.888>
- Shah, S. F. A., Ginossar, T., Bentley, J. M., Zimet, G., & McGrail, J. P. (2021). Using the Theory of Planned behavior to identify correlates of HPV vaccination uptake among college students attending a rural university in Alabama. *Vaccine*, 39(51), 7421–7428. <https://doi.org/10.1016/J.VACCINE.2021.10.082>
- Shalilah, N. F., & Nugroho, R. S. (2022, April 20). Vaksin Kanker Serviks HPV Gratis, Siapa Saja yang Akan Menerima? Artikel ini telah tayang di Kompas.com dengan judul "Vaksin Kanker Serviks HPV Gratis, Siapa Saja yang Akan Menerima? Kompas. <https://www.kompas.com/tren/read/2022/04/21/160000665/tahun-2023-vaksin-kanker-serviks-hpv-akan-diberikan-secara-nasional->
- Tarmizi, S. N. (2023, August 9). Kemenkes Canangkan Perluasan Imunisasi Gratis Untuk cegah Kanker Leher Rahim. Kemenkes. <https://www.kemkes.go.id/id/rilis-kesehatan/kemenkes-canangkan-perluasan-imunisasi-gratis-untuk-cegah-kanker-rahim>
- Wantini, N. A., & Indrayani, N. (2020). Ketersediaan Vaksinasi HPV pada Remaja Putri Ditinjau dari Faktor Orang Tua. *Jurnal Ners Dan Kebidanan (Journal of Ners and Midwifery)*, 7(2), 213–222.
- Zhang, S. B. S., Batur, P., & Ncmp, C. (2019). Human papillomavirus in 2019: An update on cervical cancer prevention and screening guidelines. *Cleveland Clinic Journal of Medicine*, 86(3), 173.