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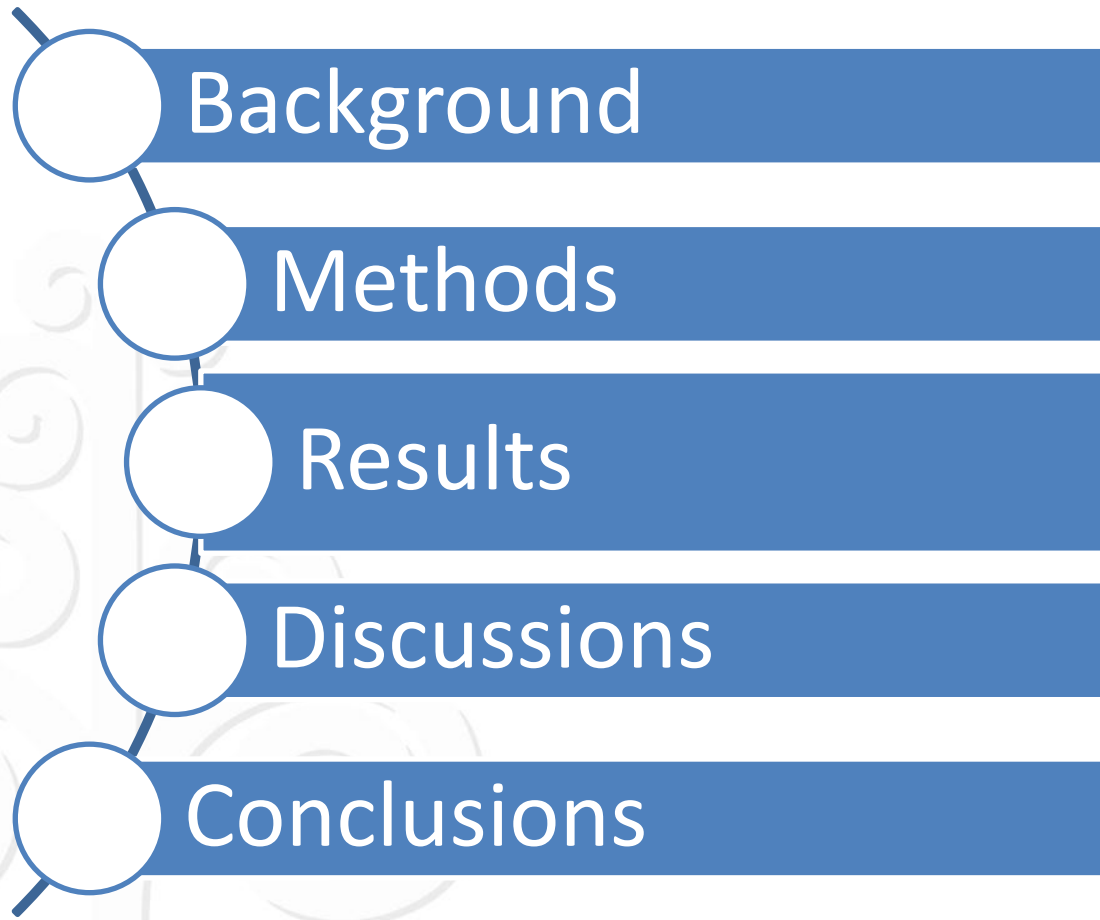
KNOWLEDGE, PERCEPTION, AND ACCEPTANCE OF HPV VACCINATION AND SCREENING FOR CERVICAL CANCER AMONG WOMEN IN YOGYAKARTA PROVINCE, INDONESIA

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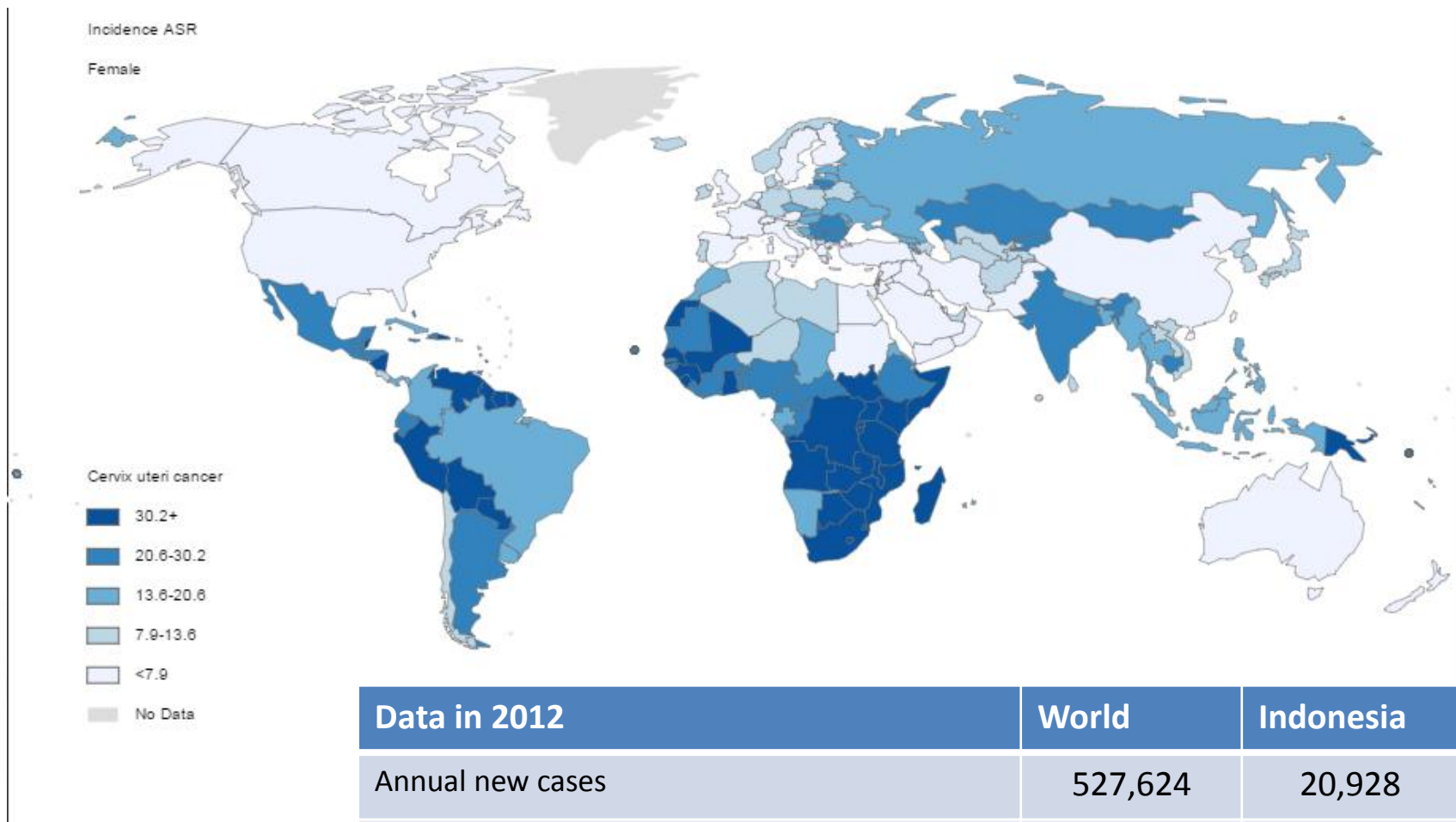


Outline





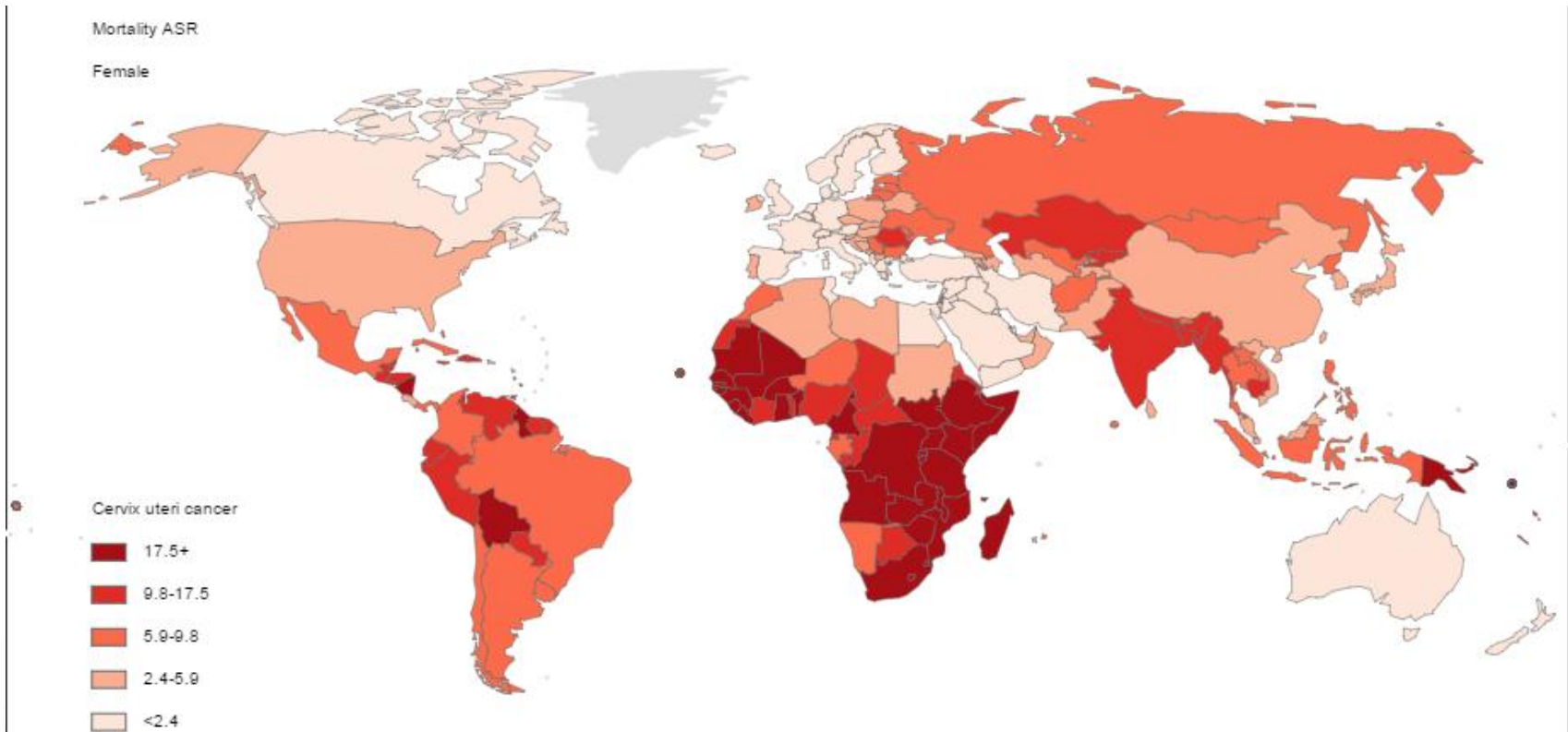
Background: Incidence of cervical cancer



Data in 2012	World	Indonesia
Annual new cases	527,624	20,928
Crude incidence rate (per 100,000 population)	15.1	17
Incidence ASR (per 100,000 population)	14	17.3



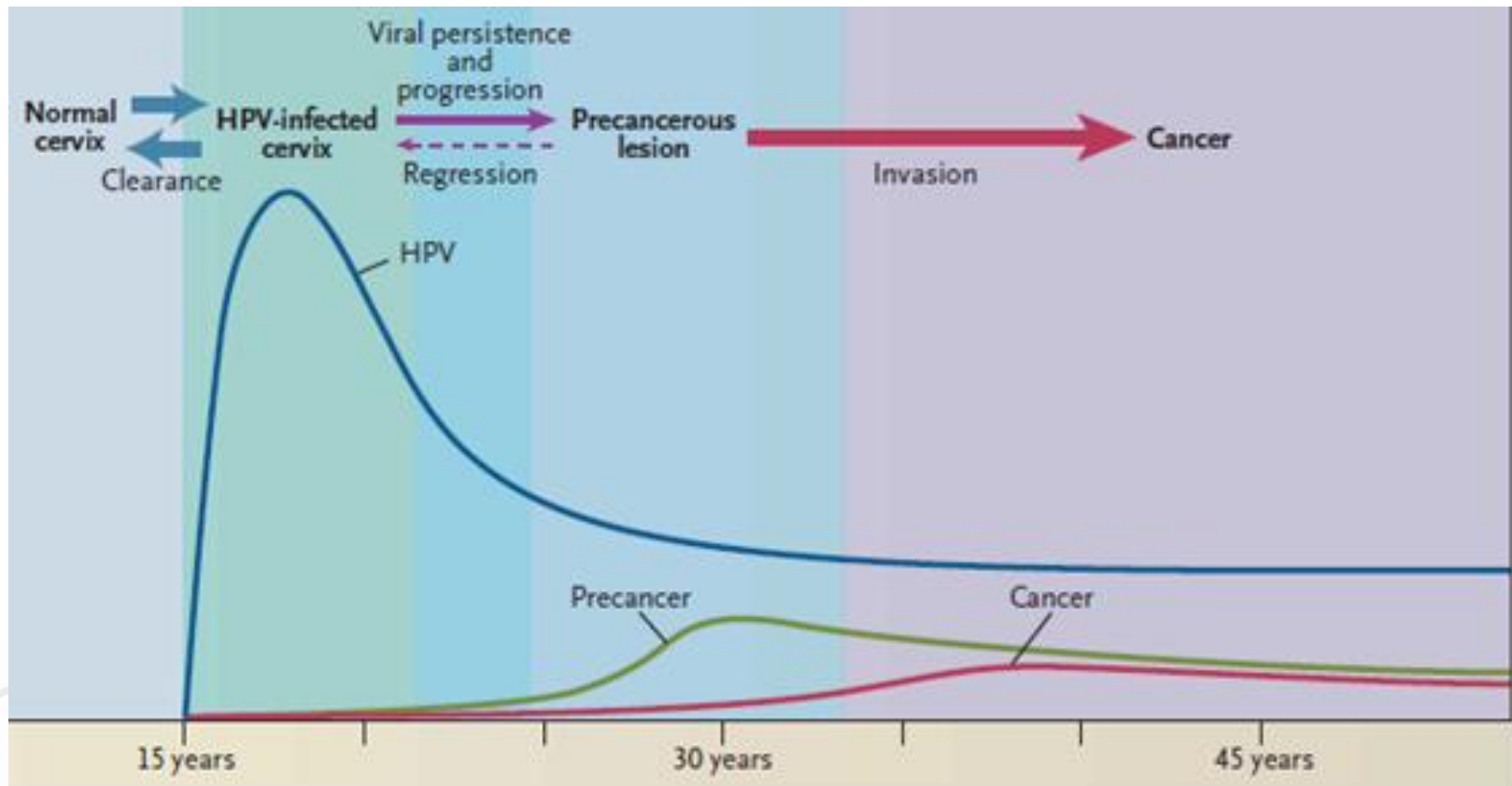
Background: Mortality of cervical cancer



Data in 2012	World	Indonesia
Annual death	265,672	9,498
Crude mortality rate (per 100,000 population)	7.6	7.7
Mortality ASR (per 100,000 population)	6.8	8.1



Background: Natural history of cervical cancer disease



vaccination

screening
Treatment



Background:

Management of cervical cancer disease

- HPV vaccination: to prevent HPV infection → targeted to girls aged 9 – 13 y
 - Bivalent vaccine (Cervarix®)
 - Quadrivalent vaccine (Gardasil®/Silgard®)
 - Screening: to early detect pre-cancer lesions → targeted to women aged 30 – 65 y
 - Cytology-based: conventional (Pap Smear), LBC (Liquid Based Screening)
 - Visual: VIA (visual inspection with acetic acid), VIAM (VIA with low-level magnification), VILI (visual inspection using Lugol's iodine solution)
 - HPV testing
 - Treatment: to treat and control the disease
 - Treatment of pre-cancer lesions: Cryotherapy, Cervical conization, LEEP (Loop Electro Surgical Excision Procedure), Hysterectomy
 - Treatment of invasive cervical cancer: Surgery, Radiotherapy, chemotherapy
- to facilitate the development of a proper program of HPV vaccination and screening for cervical cancer, it is important to understand the knowledge, perception, and acceptance among women as target population of the program



Objectives

- To evaluate knowledge, perception, and acceptance related to cervical cancer, HPV vaccination and screening for cervical cancer among Indonesian women, particularly in Yogyakarta province, Indonesia



Methods:

study design and subject

- Study design: cross sectional - observational study
- Respondents:
 - Young women: 192 (Sleman District and Yogyakarta Municipality) → school-based survey in Gadjah Mada University
 - Adult women: 100 (Gunungkidul District and Yogyakarta Municipality) → community-based survey
 - Parents (of girls aged 12 – 15): 100 (Bantul District and Yogyakarta Municipality) → school-based survey in junior high school



Methods:

study instrument

Study instrument:

- A self-administered questionnaire → developed based on instruments used in previous studies in several different settings
- The questionnaire in Bahasa Indonesia was test for its construct validity in similar population with sample of study → The final validated questionnaire was used in the study
- The questionnaires consisted of four parts as follows:
 - Part 1 included information regarding socio-demographic characteristics and cancer-related characteristics;
 - Part 2 examined knowledge regarding cervical cancer, HPV vaccination, and screening for cervical cancer;
 - Part 3 examined perception about cervical cancer, HPV vaccination, and screening for cervical cancer; and
 - Part 4 examined acceptance towards HPV vaccination and screening for cervical cancer.

Methods: data analysis



- Characteristics of sample were presented descriptively based on the common group classification
 - Descriptive statistics was used to analyze description of demographics characteristics.
- Knowledge, perception, and acceptance were also presented descriptively based on the distribution of answer of each question.
 - Knowledge was categorized as high and lack knowledge level using the cut-off point of median score in each group;
 - Perception was categorized as positive and negative perception using the cut-off point of median score in each group.
 - Crosstab analysis using Chi-Square was used to analyze the relationship between demographics characteristics versus knowledge, perception, and acceptance.

Results: Characteristics of respondents



Socio-demographic Characteristics	Students (n/%)	Adult women (n/%)	Parents (n/%)
Cluster (N)	192	100	100
- Health faculty / Urban community	96 (50)	50 (50)	50 (50)
- Non-health faculty / Rural community	96 (50)	50 (50)	50 (50)
Age (N)	191	91	100
- 16-20	105 (54,9)	n.a	n.a
- 21-25	83 (43,5)	n.a	n.a
- >26	3 (1,6)	n.a	n.a
- < 41	n.A	23 (25.3)	47 (47)
- 41 - 45	n.A	19 (20.8)	32 (32)
- > 45	n.A	49 (53.8)	21 (21)
Marital status (N)	191	96	100
- single	187 (97,9)	17 (7.7)	3 (3)
- married	4 (2,1)	79 (82.3)	97 (97)
Education (N)	192	97	100
- No formal education	n.A	2 (2.1)	2 (2)
- Elementary school	n.A	14 (14.4)	21 (21)
- Junior high school	n.A	24 (24.7)	11 (11)
- Senior high school	163 (84,9)	37 (38.1)	26 (26)
- Bachelor degree	27 (14,1)	19 (19.6)	40 (40)
- postgraduate degree	2 (1,0)	1 (1.0)	0 (0)
Family income (N)	183	91	100
- < 2,000,000	33 (18,0)	64 (70.3)	50 (50)
- 2,000,000 - 5,000,000	96 (52,5)	21 (23.1)	34 (34)
- > 5,000,000	54 (29,5)	6 (6.6)	16 (16)
Occupation		90	100
- Health professional	n.a	1 (1.1)	4 (4)
- Non-health professional	n.a	21 (23.1)	38 (38)
- House wife	n.a	46 (51.1)	58 (58)

Results: Characteristics of respondents



Cancer-related Characteristics	Students (n/%)	Adult women (n/%)	Parents (n/%)
History of cancer in family (N)	190	95	100
- Yes	35 (18.4)	7 (7.4)	10 (10)
- No	155 (81.6)	88 (92.6)	90 (90)
Having heard about cervical cancer (N)	192	98	100
- Yes	189 (98.4)	60 (61.2)	65 (65)
- No	3 (1.6)	38 (38.8)	35 (35)
Having heard about HPV vaccination (N)	192	n.a	100
- Yes	126 (65.6)	n.a	44 (44)
- No	66 (34.4)	n.a	56 (56)
Having heard about screening (N)	192	94	100
- Yes	84 (43.8)	43 (45.7)	38 (38)
- No	108 (56.2)	51 (54.3)	62 (62)
Having been vaccinated (N)	192	n.a	n.a
- Yes	15 (7.8)	n.a	n.a
- No	177 (92.2)	n.a	n.a
Having been screened (N)	192	95	100
- Yes	3 (1.5)	26 (27.4)	26 (26)
- No	189 (98.5)	69 (72.6)	74 (74)
Having family who have been screened (N)	192	93	n.a
- Yes	29 (15.2)	26 (28.0)	n.a
- No	163 (84.8)	67 (72.0)	n.a
Having family who have been vaccinated (N)	192	n.a	100
- Yes	29 (1.25)	n.a	4 (4)
- No	163 (84.8)	n.a	96 (96)

Results: Knowledge



Statements	Students	Adult women	Parents
Knowledge regarding cervical cancer	%	%	%
- Symptoms of cervical cancer could not be recognized at early stage	33.3	18	26
- Cervical cancer is caused by virus infection	90.1	84	86
- Women who sexually active have more risk on cervical cancer than women who sexually active	73.7	53	56
- Presence of cancer in family increase the risk on cervical cancer	85.3	68	65
- HPV infection could not be prevented using antibiotic	64.4	29	35
- HPV infection could not be treated using antibiotic	73.7	30	50
- One of 3 women having HPV infection	66.8	36	29
- HPV infection is transmitted by sexual activity	60.3	75	63

Results: Knowledge



Statements	Students	Adult women	Parents
Knowledge regarding HPV vaccination and screening for cervical cancer	%	%	%
- Screening using VIA could be conducted in primary health center	50	74	n.a
- A women need not only once in lifetime for cervical cancer screening	86.8	77	n.a
- one type of any vaccination could not protect from all kinds of infections	88	56	70
- A women who have been vaccinated by HPV needs any screening	82	68	76
- HPV vaccination does not give life-long protection towards cervical cancer	78.5	61	n.a

Results: Perception of students



Statements	Students (%)				
	N	4	3	2	1
1. Cervical cancer is a serious disease	192	61.5	38	38	0.5
2. Cervical cancer causes physical problems	192	28.1	64.1	6.8	1
3. Cervical cancer causes stress	191	39.8	55.5	3.7	1
4. Cervical cancer causes unhappy life	191	37.2	47.1	13.1	2.6
5. Cervical cancer gives burden to family member	191	29.8	62.3	7.9	0
6. Being afraid of suffering cervical cancer	192	71.4	27.6	0	1
7. Willing to do HPV vaccination/screening due to risks of cervical cancer	189	4.2	44	46.1	5.8
8. Preventing of cervical cancer is better than treating it	192	79.2	18.8	1	1
9. HPV vaccination/screening needs high cost	190	18.4	63.2	17.4	1.1
10. Having plan to do HPV vaccination/screening	191	17.3	73.4	8.9	0
11. Screening for cervical cancer is very important to be taken by woman	n.a				
12. Encourage daughter/relatives to take HPV vaccine	n.a				

4=strongly agree; 3=agree; 2=disagree; 1=strongly disagree

Results: Perception of adult women



Statements	Adult women (%)				
	N	4	3	2	1
1. Cervical cancer is a serious disease	100	32	52	12	4
2. Cervical cancer causes physical problems	100	16.3	51	26.5	6.1
3. Cervical cancer causes stress	100	18.2	53.5	25.3	3
4. Cervical cancer causes unhappy life	100	29.9	50.5	15.5	4.1
5. Cervical cancer gives burden to family member	100	21	48	26	5
6. Being afraid of suffering cervical cancer	100	43.3	46.4	7.2	3.1
7. Willing to do HPV vaccination/screening due to risks of cervical cancer	100	36	54	3	7
8. Preventing of cervical cancer is better than treating it	100	62	34	3	1
9. HPV vaccination/screening needs high cost	100	4	26.3	53.5	16.2
10. Having plan to do HPV vaccination/screening	100	18.4	65.3	11.2	5.1
11. Screening for cervical cancer is very important to be taken by woman	100	37	59	0	4
12. Encourage daughter/relatives to take HPV vaccine	100	23.2	68.7	5.1	3

4=strongly agree; 3=agree; 2=disagree; 1=strongly disagree

Results: Perception of parents



Statements	Parents (%)				
	N	4	3	2	1
1. Cervical cancer is a serious disease	100	72	27	1	0
2. Cervical cancer causes physical problems	100	36	59	4	1
3. Cervical cancer causes stress	100	42	47	11	0
4. Cervical cancer causes unhappy life	100	40	47	8	5
5. Cervical cancer gives burden to family member	100	23	50	22	5
6. Being afraid of suffering cervical cancer	100	75	20	3	2
7. Willing to do HPV vaccination/screening due to risks of cervical cancer	100	43	50	5	2
8. Preventing of cervical cancer is better than treating it	100	68	32	0	0
9. HPV vaccination/screening needs high cost	100	30	32	28	10
10. Having plan to do HPV vaccination/screening	n.a				
11. Screening for cervical cancer is very important to be taken by woman	n.a				
12. Encourage daughter/relatives to take HPV vaccine	100	34	61	3	2

4=strongly agree; 3=agree; 2=disagree; 1=strongly disagree

Results: Acceptance



Statements	Students	Adult women	Parents
	n (%)	n (%)	n (%)
Accepts to take HPV vaccine/screening	176 (91.7)	90 (90.0)	91 (91)
Factors enhancing to uptake of HPV vaccine			
- Efficacy of HPV vaccine/screening	162 (84.4)	77,0	80
- Safety of HPV vaccine	16 (8.3)	54,0	18
- Having risk of cervical cancer	0	17,0	
- Others	8 (4.2)	7,0	0
Barriers to uptake of HPV vaccine			
- Do not have risk of cervical cancer	8 (4.2)	4,0	4
- Afraid of side effect of vaccine	6 (3.1)	2,0	4
- Doubt of effectiveness of vaccine	1 (0.5)	0	3
- High cost of HPV vaccine	0 (0)	1,0	1
- Others	1 (0.5)	2,0	0



Results: score of knowledge, perception and acceptance

	Students		Adult women		Parents	
	Score	N or % of total value	Score	N or % of total value	Score	N or % of total value
Knowledge score		192		100		100
- Median of score	9	69.2	7	53.8	6	60
- Good knowledge	≥ 9	123 (64.1)	≥ 7	68 (68.0)	≥ 6	44 (44)
- Lack of knowledge	< 9	69 (35.9)	< 7	32 (32.0)	< 6	56 (56)
Perception		192				100
- Median of score	33	82.5	36	75	35	87.5
- Positive perception	≥ 33	118 (61.5)	≥ 36	57 (57.0)	≥ 35	48 (48)
- Negative perception	< 33	74 (39.5)	< 36	43 (43.0)	< 35	52 (52)
Acceptance						
- Accepts to take HPV vaccine		176 (91.7)		90 (90.0)		91 (91)



Discussions

- Knowledge:
 - This study identified that knowledge about cervical cancer, and HPV vaccination/screening was not quite high among the respondents group
 - Knowledge of some aspects were very low, for instance, cervical cancer symptom and cervical cancer management
 - Most of respondents knew the etiology of cervical cancer
- The aspects of knowledge with low level should be emphasized in the education material related to cervical cancer.



Discussions

- Perception:
 - Positive perception of respondents about cervical cancer and HPV vaccination/screening was also not high.
 - The high cost of HPV vaccine and willingness to take HPV vaccination/screening if having the risks to get cervical cancer were the main issues to contribute to negative perception of respondents.
 - Since HPV vaccine is quite expensive and is not covered in most health insurance in Indonesia, the program will be burden for target population for spending out-of-pocket to the healthcare. - Further study about willingness to pay for HPV vaccination might be important to be conducted.
 - In contrast, screening with VIA are available in almost all primary health center in Indonesia with no cost or very cheap cost to take the healthcare



Discussions

- Acceptance:
 - The acceptance of HPV vaccination and screening for cervical cancer examined from this study was very high (>90%).
 - This finding was in line with previous study conducted in Indonesia in which the acceptance of HPV vaccination was 96% (Jaspers et al, 2011).
 - The main factor enhancing the acceptance to take the program identified from respondents was efficacy of HPV vaccine and screening, meanwhile the main factor as barrier the acceptance to take the program was belief of not having the risks to get cervical cancer.
- Association between respondents' characteristics and knowledge, perception, and acceptance of cervical cancer and HPV vaccination/screening:
 - Most of characteristics were not significantly associated.
 - Only characteristics of experience related to cancer and exposure to information had significant relationship with knowledge, perception, and acceptance of HPV vaccination and screening for cervical cancer.



Conclusion

The study findings provide detail description of knowledge, perception, and acceptance regarding cervical cancer and strategies for cervical cancer prevention and control.

These might give input for the development of a proper program of HPV vaccination and screening for cervical cancer in Indonesia



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