

## ICASH-A16

**ADOLESCENTS' PROBLEM RECOGNITION, CONSTRAINT RECOGNITION AND LEVEL OF INVOLVEMENT IN REPRODUCTIVE HEALTH INFORMATION SEEKING AND PROCESSING****Ricky Alexander Samosir<sup>1,\*</sup>, Hendriyani<sup>2</sup>**<sup>1</sup>*Department of Society and Health, Faculty of Social Sciences and Humanities, Mahidol University*<sup>2</sup>*Department of Communication, Universitas Indonesia*

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**ABSTRACT**

**Background:** As social and sexual being, adolescent have rights to exchange, seek and process information regarding their sexual and reproductive health. However, many adolescent in Indonesia did not seek and process information about reproductive health due to some barriers. Using situational theory of publics in the context of adolescent reproductive health in Indonesia, this study aimed to determine the effect of problem recognition, constraint recognition and level of involvement on information seeking and information processing.

**Methods:** This cross-sectional study was conducted in September until December 2013 among 124 high school students in SMA Angkasa 1 Lanud Medan.

**Results:** This study found that problem recognition, constraint recognition and level of involvement has 14% effect on information seeking with constraint recognition as the independent variable that has the biggest effect (12.1%). Problem recognition, constraint recognition and level of involvement has 9.8% effect on information processing with constraint recognition as the independent variable that has the biggest effect (8.1%).

**Conclusions:** Realizing that constraint recognition had the highest effect both on information seeking and information processing, researcher recommend health communication campaign manager has to reduce adolescent's constraint recognition in reproductive health, so adolescent can have higher information seeking and processing in reproductive health.

**Keywords:** Situational theory of publics; reproductive health; information seeking; information processing; adolescent

**INTRODUCTION**

Based on population census in 2010, the population of adolescent (15-24 years) accounted more than one-fourth of 242 million Indonesia citizens. The number of adolescent in Indonesia has been increasing significantly from approximately 20% in 2000 to 27.6% in 2010 [1]. High number of Indonesian adolescent raise more concern in fulfilling adolescent's rights, including right to education, food, and healthcare.

One of the adolescent's rights is the right of reproductive health. Reproductive health is a state of complete physical, mental and social well-being, not only free from disease or infirmity, but also have a good reproductive processes, functions and system at all stages of people's life [2]. Reproductive

health implies everyone is able to reproduce and have a right to determine when, how, and how many times they do it.

International Conference on Population and Development (ICPD) in Cairo on September 1994 specified some key components in reproductive health, such as: family planning, safe motherhood, sexually transmitted disease and prevention of human immunodeficiency virus (HIV) and adolescent reproductive health, free from violence and coercion, abortion, and other reproductive health conditions.

After more than 20 years, not all of adolescent had their reproductive health rights. Many adolescent face many risks in their reproductive health such as: sexually transmitted disease, HIV/AIDS, and unwanted pregnancy. Data from The Indonesia Young Adult Reproductive Health Survey 2007 showed that only 1 out of 4 adolescent knew the signs of puberty, less than 3% adolescent know what HIV/AIDS is [3]. This is caused by the limited information and education about reproductive health for adolescent.

Not only social beings, but adolescent are also sexual beings. Adolescent need to discuss about their sex and sexual needs to other people. However, discussing about sex in Indonesia is considered taboo. This is happened because people believe discussing sex with adolescent will leads them to free sex earlier. Subsequently, Pangkahila et al. stated that adolescent in Indonesia received information about reproductive health from ineligible sources, such as from friends and porn video that can be easily accessed from internet [4].

The efforts that have been done so far, both through communication and educational campaigns, have not reached all adolescent in Indonesia. Many communication campaigns did not run as expected because the approach did not fit with what Indonesian adolescent needs and wants [5]. The Healthy People 2010 Information said there is no other way to succeed public health except utilizing communication tools to spread information to individuals and communities. Without information, people cannot determine what they should do in their life.

The process of delivering message has a relationship with public relations profession. With the role of public relations, information can be delivered to the public effectively. Situational Theory of Publics is a public relations theory that introduced by James E. Grunig in 1965. Although it is an old theory, it is still exists and often used to explain how public seek and process information. Situational theory of publics describes when and how the public communicates and when communications are addressed to the public. This theory explains when people communicate and when communications aimed at people are most likely to be effective. There are two dependent variables described through situational theory of publication: information seeking and information processing. Both of these dependent variables are influenced by three independent variables, namely problem recognition, constraint recognition, and level of involvement.

In information seeking, the public actively seek information with efforts. Thani & Hashim mentioned that information seeking is a consequence of the needs for information possessed by a person, which in turn to seek information through both formal or informal sources to satisfy his/her desire of information [information needs] [6]. Information seeking can be described as an individual's way of gathering information that he will use to update his knowledge and self-development [7].

In information processing, public do not seek information actively: they are exposed with information without any effort. For example, a person receives information through commercial advertising without any intentional searching process, a person obtaining information through a mailing list or a student who processes information through the lesson material provided by his teacher. We are often exposed to information while reading magazines randomly or listening to the radio. Information processing [passive communication behavior] has less impact than information seeking [active communication behavior]. Previous research found that most television viewers do not remember anything they have heard fifteen minutes after they watched [8].

Problem recognition represents the extent to which people are aware that something is missing or amiss in a situation, thereby knowing that they need information. According to Grunig & Hunt, problem

recognition have positive impact on information seeking and information processing. When the public recognize a problem, they will find information more often and willing to process the information. Problem recognition influences information seeking and information processing positively. In other words, the higher problem recognition the public have, the higher information seeking and information processing they do [8]

Constraint recognition represents the extent to which people see themselves limited by external factors, versus seeing that they can do something about the situation. It means that the public realize that there are some constraint that they may face when they want to do something. Grunig said when the public realize that they have many constraint to do something, they will not seek and process information. If people think they can make a difference or have an effect on problem situation, they will seek information to make plans for action. Constraint recognition influence information seeking and information processing negatively. In other words, the higher constraint recognition public have, the lower information seeking and information processing they do [8].

Level of involvement represents the extent to which people see themselves being involved with a certain situation. Involvement is defined as the level of interest and interest of a person to a specific situation [9]. According to Grunig, the more people see themselves involve in a certain situation, the more likely they want to communicate about it [10]. Level of involvement influences information seeking and information processing positively. In other words, the higher level of involvement people have, the higher information seeking and information processing they do.

This research focuses on answering these research questions: (1) how big is the effect of problem recognition, constraint recognition, and level of involvement on adolescent information seeking in reproductive health? (2) How big is the effect of problem recognition, constraint recognition and level of involvement on adolescent information processing in reproductive health?

## **MATERIALS AND METHODS**

### *Study Population*

Study population of this research is high school students in SMA (Sekolah Menengah Atas, High School) Angkasa 1 Lanud Medan. Researchers chose Medan as their research site because previous research found that adolescent in Medan has high risk sexual behavior [11]. SMA Angkasa 1 were chosen because this school is an inclusive school which had students with diverse religion, tribe, and economic backgrounds, therefore this school can be a portrait of Medan city.

### *Sample and data collection*

To be eligible to participate in this research, participants must be adolescent [age 10-19 years]. In determining the sample size, researchers used Slovin's formula. This formula were used because researchers know the exact number of population. The number of sample for this research based on Slovin's formula were 124 student [64 boys and 60 girls]. The sampling in this study was done randomly. All sample population have equal opportunities to be selected as sample. This method is often referred as the best procedure [12]. Zanten argues that if all elements of population are identifiable [there is a good administrative list], simple random sampling is usually the best [13]. Researchers listed all active student in SMA Angkasa 1 Lanud Medan and made a sequence number on the name of each student. To determine who the sample is, researchers used a random number table.

### *Instruments*

A short and structured questionnaire was developed in consultation with some teachers, public health professionals, and high school student. The questionnaire was written in Bahasa Indonesia [Indonesian Language]. It took about 5 to 10 minutes to complete one questionnaire. The domains of this questionnaire include participants' characteristics, five questions about problem recognition, five questions about constraint recognition, five questions about level of involvement, six questions about information seeking and nine questions about information processing. To test the feasibility of the instruments, researchers have tested the validity and reliability of each indicator on each variable

statistically. All variables are reliable because all variables had Cronbach’s Alpha values higher than 0.5 and all indicators has corrected item-total correlations higher than 0.25. All variables are valid because the Kaiser-Meyer-Olkin [KMO value] of each variables are higher than 0.5.

*Statistical Analysis*

Data were analyzed using SPSS 20 software. Multiple regression enter method were used in this research to see how big the effect of independent variable on dependent variable is. Researchers also performs multiple regression stepwise method to find which independent variable has the biggest effect on the dependent variable.

**RESULTS**

Table 1. Participant characteristic

Characteristic		n	%	Class	n	%
Sex	Male	64	51.6	X [first year]	45	36.3%
	Female	60	48.4	XI-IA [second year science]	26	21.0%
Age	Mean	15.9		XI-IS [second year social]	12	9.7%
	14	2	1.6	XII-IA [third year science]	30	24.2%
	15	41	33.1	XII-IS [third year social]	11	8.9%
	16	45	36.3			
	17	32	25.8			
	18	4	3.2			

There were 64 boys and 60 girls who were recruited as sample in this study. Mean age of the sample was 15.9 years. The median age was 16 years. 36% of the sample was first year student, 21% was second year science student, 9.7% was second year social science student, 24.2% was third year science student and 8.9% was third year social science student.

*Problem recognition, constraint recognition and level of involvement*

Table 2. Adolescents’ problem recognition, constraint recognition and level of involvement

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean
	n	%	n	%	n	%	n	%	n	%	
<b>Problem recognition</b>											
I feel worried about HIV/AIDS	0	0.0%	0	0.0%	1	0.8%	43	34.7%	80	64.5%	4.64
I feel worried about sexually transmitted diseases [STDs]	0	0.0%	0	0.0%	5	4.0%	46	37.1%	73	58.9%	4.55
I feel worried about the possibility of me and my partner having an unwanted pregnancy	4	3.2%	9	7.3%	11	8.9%	38	30.6%	62	50.0%	4.17
I feel worried about unsafe sex	0	0.0%	3	2.4%	7	5.6%	49	39.5%	65	52.4%	4.42
I feel worried about reproductive tract infections [RTIs]	0	0.0%	5	4.0%	9	7.3%	39	31.5%	71	57.3%	4.42
<b>Constraint recognition [unfavorable item]</b>											
I think I can do something to prevent HIV/AIDS	1	0.8%	2	1.6%	35	28.2%	52	41.9%	34	27.4%	2.06
I think I can do something to prevent sexually transmitted diseases [STDs]	1	0.8%	7	5.6%	21	16.9%	59	47.6%	36	29.0%	2.02
I think I can do something to prevent unwanted pregnancy	1	0.8%	8	6.5%	23	18.5%	48	38.7%	44	35.5%	1.98
I think I can do something to prevent unsafe sex	2	1.6%	4	3.2%	17	13.7%	61	49.2%	40	32.3%	1.93



	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Problem recognition</b>											
I think I can do something to prevent reproductive tract infections [RTIs]	2	1.6%	4	3.2%	20	16.1%	69	55.6%	29	23.4%	2.04
<b>Level of involvement</b>											
I think it is important for me not to be a parent at too young	6	4.8%	3	2.4%	4	3.2%	32	25.8%	79	63.7%	4.41
I think it is important for me not to get HIV/AIDS	0	0.0%	2	1.6%	3	2.4%	23	18.5%	96	77.4%	4.47
I think it is important for me not to get sexually transmitted diseases [STDs]	4	3.2%	1	0.8%	3	2.4%	32	25.8%	84	67.7%	4.54
I think it is important for me not to do unsafe sex	0	0.0%	4	3.2%	7	5.6%	40	32.3%	73	58.9%	4.47
I think it is important for me not to get reproductive tract infections [RTIs]	1	0.8%	3	2.4%	4	3.2%	51	41.1%	65	52.4%	4.42

Each indicators in problem recognition variable had the mean ranged from 4.17 to 4.64. It means that the samples tended to have high problem recognition. The indicators with the highest and lowest mean were 'I feel worried about HIV/AIDS' and 'I feel worried about the possibility of me and my partner having unwanted pregnancy' respectively.

Indicators in constraint recognition were unfavorable items. Each indicators in this variable had mean ranged from 1.93 to 2.06. From this number, we can see that samples tended to have low constraint recognition. The indicator with highest mean was 'I think I can do something to prevent HIV/AIDS' and the lowest was 'I think I can do something to prevent unsafe sex'.

Indicators in level of involvement had mean ranged from 4.41 to 4.54. The samples tended to have high level of involvement. The indicators with highest mean was 'I think it's important for me not to get sexually transmitted disease [STDs]' and the lowest means was 'I think it's important for me not to be a parent at too young'.

### Information seeking and information processing

Table 3. Adolescents' information seeking and information processing

	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Information seeking</b>											
I seek information actively about reproductive health from doctors or health workers	0	0.0%	3	2.4%	51	41.1%	42	33.9%	28	22.6%	3.77
I seek information actively about reproductive health from my parents	0	0.0%	5	4.0%	44	35.5%	53	42.7%	22	17.7%	3.74
I seek information actively about reproductive health from my teachers	0	0.0%	9	7.3%	40	32.3%	66	53.2%	9	7.3%	3.6
I seek information actively about reproductive health from my siblings	3	2.4%	13	10.5%	63	50.8%	37	29.8%	8	6.5%	3.27
I seek information actively about reproductive health from my friends	4	3.2%	14	11.3%	66	53.2%	32	25.8%	8	6.5%	3.21
I seek information actively about reproductive health from internet	3	2.4%	9	7.3%	37	29.8%	60	48.4%	15	12.1%	3.6
<b>Information processing</b>											
I receive information about reproductive health from my parents	1	0.8%	5	4.0%	38	30.6%	56	45.2%	24	19.4%	3.78



Information seeking	Strongly disagree		Disagree		Neutral		Agree		Strongly agree		Mean
	n	%	n	%	n	%	n	%	n	%	
I receive information about reproductive health from my friends	4	3.2%	15	12.1%	58	46.8%	37	29.8%	10	8.1%	3.27
I receive information about reproductive health from my siblings	2	1.6%	9	7.3%	69	55.6%	35	28.2%	9	7.3%	3.32
I receive information about reproductive health from my teacher	0	0.0%	7	5.6%	39	31.5%	58	46.8%	20	16.1%	3.73
I receive information about reproductive health from television	1	0.8%	9	7.3%	54	43.5%	46	37.1%	14	11.3%	3.52
I receive information about reproductive health from radio	3	2.4%	27	21.8%	65	52.4%	24	19.4%	5	4.0%	3.01
I receive information about reproductive health from textbooks	4	3.2%	5	4.0%	21	16.9%	72	58.1%	22	17.7%	3.83
I receive information about reproductive health from brochures or posters in hospital or community health center	0	0.0%	8	6.5%	50	40.3%	44	35.5%	22	17.7%	3.65
I receive information about reproductive health from social media [e.g. Facebook, twitter, Path, etc.]	4	3.2%	11	8.9%	46	37.1%	38	30.6%	25	20.2%	3.56

Indicators in information seeking had mean values ranged from 3.21 to 3.77. Indicators with the highest mean value was 'I seek information actively from doctors or health workers'. Indicators with the lowest mean value was 'I seek information actively from my friends'. Interestingly, indicators with the second highest mean was 'I seek information actively from my parents'.

Indicators in information processing had mean values ranged from 3.01 to 3.83. Indicators with the highest mean value was 'I receive information about reproductive health from textbook'. The lowest mean was 'I receive information about reproductive health from radio'. The second and third highest means were 'I receive information about reproductive health my parents' and 'I receive information about reproductive health my teacher' respectively.

*Effect of problem recognition, constraint recognition, level of involvement on information seeking*

Table 4. Effect of problem recognition, constraint recognition and level of involvement on information seeking (multiple regression enter method)

Independent variable	Dependent variable	R Square	Sig.
Problem recognition, constraint recognition, and level of involvement	Information seeking	0.140	0.000

The R square value is 0.140. It means problem recognition, constraint recognition, and level of involvement has 14% effect on information seeking. The significance value is 0.000, lower than 0.05. It means problem recognition, constraint recognition and level of involvement has significant effect on information seeking. To know which variable has the highest effect on information seeking, researchers used multiple regression stepwise method. After doing multiple regression stepwise method, researchers found that constraint recognition was the only independent variable that was entered. Problem recognition and level of involvement were removed.



Table 5. Effect of problem recognition, constraint recognition and level of involvement on information seeking (multiple regression stepwise method)

Independent	Dependent	Sig	R Square	Beta
Problem recognition	Information seeking	0.115		
Constraint recognition	Information seeking	0.000	0.121	-0.374
Level of Involvement	Information seeking	0.778		

Constraint recognition has 12.1% effect on information seeking. Beta coefficient of constraint recognition was -0.374. It means the lower constraint recognition that adolescent had, the higher information seeking they would do. When the score of constraint recognition decrease 1 point, then information seeking will increase 0.347 point.

*Effect of problem recognition, constraint recognition, level of involvement on information processing*

Table 6. Effect of problem recognition, constraint recognition and level of involvement on information processing (multiple regression enter method)

Independent	Dependent	R Square	Sig.
Problem recognition, constraint recognition, and level of involvement	Information processing	0.098	0.006

The R square value is 0.098. It means problem recognition, constraint recognition, and level of involvement has 9.8% effect on information processing. The significance value is 0.006, lower than 0.05. It means problem recognition, constraint recognition and level of involvement has significant effect on information processing.

Researchers also used multiple regression stepwise method to find which independent variable has the highest effect on information processing. After doing multiple regression stepwise method, researchers found that only constraint recognition was entered. Problem recognition and level of involvement were removed.

Table 7. Effect of problem recognition, constraint recognition and level of involvement on information processing (multiple regression stepwise method)

Independent	Dependent	Sig	R square	Beta
Problem recognition	Information processing	0.134		
Constraint recognition	Information processing	0.001	0.081	-0.285
Level of Involvement	Information processing	0.472		

Constraint recognition has 8.1% effect on information processing. Beta coefficient of constraint recognition was -0.285. It means the lower constraint recognition that adolescent had, the higher information processing they would do. When the score of constraint recognition decrease 1 point, then information processing will increase 0.285 point.

## DISCUSSION

Situational theory of publics has been tested in various studies, such as: political communication [14], investor relations [15], consumer relations [16], crisis management [17], drunk driving campaign [18], leukemia and lymphoma [19]. However, in this research, this theory cannot predict information seeking and processing in reproductive health among adolescent.

There are some potential factors that may have effect on information seeking and information processing among adolescent. Li et al. found that there were some other predictor of predictors of information seeking, such as: gender, education, medical history, health status, age, and income [20].

There are some limitation of this research. Firstly, Likert scale made respondents tend to choose positive answer. Secondly, researchers did not define what information is in questions. Thirdly, self-administered questionnaire limit researchers to see the seriousness of participants in answering the question.

## CONCLUSION

This research found that problem recognition, constraint recognition and level of involvement had 14% effect on information seeking. It is a small effect, considering there is 86% from other factors that influence adolescent in information seeking. From three independent variables, constraint recognition has the highest effect on information seeking in reproductive health among adolescent. Constraint recognition has 12.1% effect on information seeking. Problem recognition, constraint recognition and level of involvement have 9.8% effect on information processing. Constraint recognition had the biggest effect (8.1%) on information processing in health reproduction among adolescent.

Researchers recommend communication campaign manager to be more careful in designing communication campaign for adolescent. Fear of HIV/AIDS, sexually transmitted disease, and any other risks will make adolescent reluctant to process the information. Campaign that make adolescent optimistic will tend to make adolescent more open for reproductive information. By reducing constraint recognition among adolescent, they will be more willing to seek and process information regarding reproductive health.

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