



# 2<sup>nd</sup> IMOPH

International Meeting of Public Health  
Universitas Indonesia, November 18<sup>th</sup>-20<sup>th</sup>, 2016

## PROGRAM BOOK

*“Public Health Perspective  
on Sustainable Development Goals :  
Challenges and Opportunities  
in Asia-Pasific Region”*



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## MAPS AND VENUES

### Venue

The conference will be held in Faculty of Public Health, University of Indonesia, Campus of Universitas Indonesia, Depok 16424, Indonesia

### Getting to Depok

The city of Depok lies in the south of Jakarta, approximately two-hour drive from the International airport.

Depok may be reached by car, taxi, service bus or train. Car hire is available from the major firms at the airport. Airport buses (Damri) operate regularly from 7am to 8pm stationed in Terminal 2 Gate F. If you're going to Depok, pick the bus with destination to Depok or alternately to Pasar Minggu. From Pasar Minggu you can proceed by bus, train or simply a taxi. It takes about fifteen minutes to half an hour. Travel by late overnight sleeper is convenient if met by car or taxi.

### Taking a taxi

Accepting an offer from someone who approaches you as you exit customs to drive you into town can be risky.

Choosing a reputable taxi service would be the safest and most convenient way to get into town. Taxi firms licensed to operate transportation services (taxi or limousine) have counters inside the arrival terminals. You can easily identify their representatives by their formal uniforms and ID.

Beware with taxis that refuse to use the meter (argo). Don't tip person who tries to act as a broker for the taxi.

When you get into the taxi, always note the taxi firm and the code number displayed on the dashboard or passenger doors, the driver's name and ID. This information will help you to report to the taxi company in case problems have occurred.

Source: <http://international.ui.ac.id>



## PLENARIES

### Plenary 1

#### *The Universal Health Coverage (UHC) : Access to quality essential health care services*



#### **Dr. Hj. Eni Gustina, MPH**

**Eni Gustina** is a Director of Family Health Ministry of Health Republic Indonesia, Indonesia. She graduated bachelor degree from Faculty of Medicine, Universitas Indonesia (1982-1988), Master of Management (Human Resource Management), Universitas Widya Jayakarta, Jakarta, (2001-2003), Master of Primary Health Care Management, Asean Institute for Health Development, Mahidol University, Phutamonthon, Thailand (2003 – 2004).

She has experience as Guidance and Evaluation Section, Sub Directorate of Adolescent Health Development, Directorate of Child Health, Ministry of Health RI, 2010, Head of Promotion Health Center, General Secretariat, Ministry of Health Republic Indonesia (July 2015 –January 2016), Director of Family Health Director General of Public Health, Ministry of Health RI (January 2016 until now).

Dr. Hj. Eni Gustina, MPH in this section will presented The Universal Health Coverage (UHC) focused on access to quality essential health care services in Indonesia.

#### **Dr. Piya Hanvoravongchai**



**Piya Hanvoravongchai** is a co-director of the Equity Initiative, a recently launched program under CMB foundation to promote transformative leadership for health equity in Southeast Asia. He is an assistant director of the Thailand Research Center for Health Services System. He is an editorial board member of the *Human Resource for Health* journal, *Journal of Health Systems Research*, and *Journal of Health Science* Thailand. He published over twenty papers in international peer-reviewed journals and recently coauthored a chapter in the Oxford Textbook of Global Public Health .He later shifted his interest to focus on health system and program evaluation.

Piya received his M.D .from Mahidol University, with his Master's and doctoral degrees from the London School of Economics and Political Science, and Harvard School of Public Health respectively.

Universal Health Coverage (UHC) is one of the key health targets under the UN's Sustainable Development Goals. It identifies achieving universal health coverage as "including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all." However, achieving UHC is not an easy task and ensuring equitable access to effective health services remains a big challenge to many countries including Thailand where the coverage of health insurance was nearly universal since 2002. In his speech, Dr. Piya Hanvoravongchai will describe the movement towards UHC in Thailand with reference to the ongoing challenges to improve equity in health of the population in the region.



## PLENARIES

### Plenary 2

#### *Financial Aspect of Universal Health Coverage*



#### **Dr. Ye Htut**

Dr. Ye Htut is a medical doctor, healthcare policy analyst and certified professional in healthcare quality. He holds a Bachelor degree in Medicine and Surgery from University of Medicine 1, Myanmar, Master in Public Policy from National University of Singapore under the prestigious academic scholarship of Lee Kuan Yew School of Public Policy and Master of Health Administration from Flinders University, Australia.

Dr. Ye is registered with Myanmar Medical Council and is a member of American College of Healthcare Executives which is a renowned international society for healthcare executives who lead hospitals, healthcare systems and other healthcare organizations. He got his CPHQ Certified Professional in Healthcare Quality from National Association of Healthcare Quality, USA.

Dr. Ye is also a senior lecturer in School of Healthcare Management, Parkway college, Parkway Pantai, Singapore. In addition to providing consultancy to the hospitals in the region, Ye is holding academic positions at Parkway College and Flinders University to teach academic courses on Healthcare Policy and System Management, Healthcare Quality Management for Parkway Pantai Hospitals and Healthcare institutions in Singapore.

Dr. Ye Htut will introduce UHC, current level of achievement and general barriers among ASEAN member countries for UHC. Then he will zoom in to Singapore as a lesson learned for Asia Pacific UHC implementation.

#### **Porntep Chotchaisuwat**



**Porntep Chotchaisuwat** is a director of Planning and Budget office, National Health Security Office, Thailand. He also as assistant director of National Health Security Office Phitsanulok Regional Branch. He graduated bachelor degree from medicine of Chulalongkorn University (1994), master degree of public administration National Institute of Development Administration (NIDA) (2004) and master degree of public health (HSMP) from ITM Antwerp Belgium (2012).

He is recognized as a Director of of Planning and Budget office, NHSO since 1 Nov 2016. His experiences was as an assistant director of National Health Security Office Phitsanulok Regional Branch 2 April 2014 – 31 Oct 2016, a director of Nakhon -The Crown Prince hospital Phitsanulok province 15 May 1999-1 April 2014, a director of Chartrakam hospital Phitsanulok province 10 April 1996 – 14 May 1999, and a general practitioner at Nakhon-Thai Crown Prince hospital 2 April 1994- 9 April 1996 and his present position is Director of Bureau of Planning and Budget Administration, NHSO.



## PLENARIES

### Plenary 2

#### *Financial Aspect of Universal Health Coverage*

#### **Prof. dr. Hasbullah Thabrany, MPH, Dr.PH**



Prof. Hasbullah Thabrany has been working actively to improve social security system starting with universal health coverage (*Jaminan Kesehatan Nasional, JKN*) in Indonesia and Pension for all Indonesians starting July 2015. Mr Thabrany obtained MD degree (1980) from Universitas Indonesia and Dr.PH degree (1995) from the University of California at Berkeley, USA. He received recognition as Health Insurance Professional (HIA) and Managed Health Care Professional (MHP) from the Health Insurance Association of America, now the American Health Insurance Plans.

He was the founder of the Indonesian Association of Health Insurance Managers and became the Chairman of the Association (PAMJAKI, 1998-2010). He served as the Chairman of Examiners' Board of PAMJAKI 2010-2014. He was a key contributor of the Presidential Task Force to reform social security system (SJSN). At present, he is a professor in Health Economics and the Chairman of the Center for Health Economics and Policy Studies at Universitas Indonesia, the leading university in Indonesia.

Prof. Hasbullah Thabrany will introduce the Ina-Medicare, the Indonesian model of financing toward UHC, current achievements and challenges to improve equity and quality of health care to all Indonesians.

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## PLENARIES

### Plenary 3

### *Prevention of Mortality Associated to Disaster, Environmental Occupational Hazards and Injuries*

#### Session 1. Prevention of Mortality Associated with Occupational Hazards



**Dr. Mondastri Korib Sudaryo, M.S, Dsc**

Mondastri Korib Sudaryo has been working as a lecturer of Department of Epidemiology, Faculty of Public Health, Universitas Indonesia. Mondastri obtained his Doctor of Science in Epidemiology, from University of Groningen at Erasmus University Medical School, the Netherlands, Master of Science in Epidemiology, from University of California at Los Angeles (UCLA), USA, and Medical Doctor from University of Indonesia, Jakarta, Indonesia. His expertise is in the area of Epidemiology of communicable diseases, especially HIV/AIDS & STDs and Epidemiology of Disaster.



**Prof. Hung Yi-Chuang**

**Hung Yi-Chuang** is a Professor of Department of Public Health, Kaohsiung Medical University, Taiwan. He also a Professor and Attending Physician of Department of Occupational and Environmental Medicine, Kaohsiung Medical University Hospital.

He got his master and doctor in occupational health from Harvard School of Public Health, Harvard University, Boston, U.S.A. He also finished his doctor of medicine in Kaohsiung Medical College, Kaohsiung, Taiwan and his master of science in public health in College of Medicine, National Taiwan University, Taipei, Taiwan. Right now, Hung is a member of the Environmental and Occupational Medicine Association, Taiwan, member of the Association of Family Medicine of Taiwan and member of the International Society of Environmental Epidemiology (ISEE).

He will talk about the Prevention of Mortality Associated to Disaster, Environmental Occupational Hazards and Injuries.



## PLENARIES

### Plenary 3

#### *Prevention of Mortality Associated to Disaster, Environmental Occupational Hazards and Injuries*

##### **Session 2. Prevention of Mortality Associated with Disaster, Environmental Hazards and Injuries**

#### **Dr Richard Gun**



Dr Richard Gun was graduated from MB BS University of Adelaide 1960. He is active in several researchs, such as Fellow Australasian College of Occupational and Environmental Medicine, Occupational injury prevention, Cancer rates in participants of the British Atomic tests in Australia, Cancer rates in the petroleum industry, Occupational heat stress, and Whiplash injury.

This presentation will be based on Australian occupational mortality statistics. Since injury occurs from the uncontrolled release of energy, prevention programs must focus on means of anticipating, preventing and containing energy transfer. Prevention strategies should where possible be engineered so that they are not dependent on human behaviour. An important measure is to study the causes of previous serious injury.



#### **Prof. dra. Fatma Lestari, Msi, Phd**

Prof. Fatma is a Safety Science Professor and PhD graduated (2006) from School of Risk and Safety Sciences (AusAid funded Scholarship), University of New South Wales, Sydney Australia. Since she set as a professor in 2014, she was the first professor in the field of occupational safety and health from the University of Indonesia.

Currently she is a lecturer in program study on Occupational Health and Safety Faculty of Public Health University of Indonesia, Chairman Module Disaster Management Clump Health Sciences University of Indonesia in 2016, director of the Disaster Research and Response Center (DRRC) University of Indonesia, and also Chairman of the Technical Implementation Unit (UPT) Health, Safety and Environment (K3L) University of Indonesia.

Occupational hazards and injuries in Indonesia is still high. More than 100.000 injuries per year are occur during 2011-2015. Occupational health and safety awareness is need to be improved. Several lessons learned from accidents in oil and gas industries will be shared.



## ORAL PRESENTATION

Panel 31

Topic	: HEALTHY LIVES AND PROMOTE WELL-BEING	Chairman	: Prof.Dr. dr. Nasrin Kodim, MPH
Room	: G102	Co-Chairman	: Mila Tejamaya,S.Si.MOHS,Ph,D
Date	: November 20	Time	: 03.30 – 04.30 Pm

No	Code	Title	Author	Affiliation
238	O.31.HLP.1	KNOWLEDGE ABOUT RISK FACTORS OF CANCER AMONG ADULTS IN NEPAL	Naomi Sumi, Kritika Poudel	Hokkaido University, Japan
239	O.31.HLP.2	BEHAVIORAL INTENTION OF SUSTAINABLE WASTE MANAGEMENT ON PRIMARY SCHOOL STUDENT IN CITY OF PADANG	Aria Gusti	Universitas Andalas
240	O.31.HLP.3	ADOLESCENTS' REPRODUCTIVE HEALTH KNOWLEDGE AMONG JUNIOR HIGH SCHOOL STUDENTS IN SUB-DISTRICT MONTA DISTRICT BIMA, WEST NUSA TENGGARA 2016	Nurfadhilah	Universitas Muhammadiyah Jakarta
241	O.31.HLP.4	ANALYSIS OF FACTORS RELATED TO THE OCCURRENCE OF ACCUTE RESPIRATORY INFECTION DISEASE IN CHILDREN UNDER THREE YEARS ON THE WORK AREA OF HUTABAGINDA COMMUNITY HEALTH CENTER TARUTUNG 2015	Daniel Happy Putra	Universitas Indonesia
242	O.31.HLP.5	THE RISK HEALTH STATUS OF MEDICAL EXAMINATION IN INDONESIAN HAJJ PILGRIMS	Enny Nuryanti	Universitas Indonesia Pascasarjana
243	O.31.HLP.6	CYTOTOXICITY COMPARISON OF AVULSED TEETH'S STORAGE MEDIA, HBSS AND COCONUT WATER USING MTT ASSAY	Annisa Khairina	Universitas Indonesia





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**Editor**

Dr. Dra. Dewi Susanna, M.Kes  
Kartika Anggun Dimar Setio, SKM, MKM  
Milla Tejamaya, S.Si., MOHS., Ph.D.

**Design and Lay Out**

Galila Amini, S.Keb, Bd  
Siti Walidah Mailina Istiqomah, SST

The 2<sup>nd</sup> IMOPH Secretariat: D Building, Room D309,  
Faculty of Public Health, Campus of UI Depok, 16424, Indonesia  
Phone : +62 21 7864976, +62 21 7270803, Email : [imoph2016@gmail.com](mailto:imoph2016@gmail.com)  
Website : <http://www.imoph.ui.ac.id> or <http://www.conference.ui.ac.id/imoph>





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# The 2<sup>nd</sup> International Meeting of Public Health

*Public Health Perspective on Sustainable Development Goals:  
The Challenges and Opportunities in Asia-Pacific Region*

**Universitas Indonesia, November 18<sup>th</sup>-20<sup>th</sup>, 2016**

## **Certificate**

Awarded to

**Aria Gusti**

as **Oral Presenter**

Agustin Kusumayati, MD., M.Sc., Ph.D.  
Chair of The Conference



# Factors Associated with The Behavioral Intentions Of Sustainable Waste Management on Primary School Students in City of Padang, Indonesia

Aria Gusti

Faculty of Public Health, Andalas University, Padang, West Sumatera, Indonesia  
[aria.mkes@gmail.com](mailto:aria.mkes@gmail.com)

**ABSTRACT:** This study examined the behavioral intention to implement sustainable waste management on primary school students by using the framework of the Theory of Planned Behavior. The purpose of this study was to determine the factors associated with the behavioral intention to implement sustainable waste management. Population and sample in this study were primary school students in city of Padang, West Sumatera, Indonesia. The data collected for this study were analyzed using structural equation modeling. The results of this study stated that the knowledge of the sustainable waste management has a significant relationship with the attitudes towards the sustainable waste management behavior. Attitudes towards the sustainable waste management behavior, subjective norms, and perceived behavioral control also had a significant relationship with the behavioral intention to implement sustainable waste management. This study has helped in understanding the relative strength of the determinants of the behavioral intention to implement sustainable waste management. The biggest strength is the relationship between the perceived behavioral control and the behavioral intention, followed by the relationship between subjective norm and the behavioral intention, and the weakest were the relationship between attitude and the behavioral intention. These findings have important implications for the school as well as for policy makers.

**KEYWORDS:** Intention, Behavior, Sustainable, Waste, Management.

## 1 INTRODUCTION

International Global issues with respect to the future of urban areas one of them is municipal solid waste. The amount of waste as one of the important products of urban lifestyle, growing faster than the numbers of urbanization. Ten years ago there were 2.9 billion urban population generates 0.64 kg of waste per person per day (0.68 billion tons per year). Currently, the number of urban population has increased to about 3 billion people who produce 1.3 billion tons of waste per year. It is estimated that in 2025 the urban population will increase to 4.3 billion people and produced 2.2 billion tons of waste per year [1]. Then the future will be needed very large budget to improve waste disposal and treatment facility.

Waste that is not maintained properly not only have a negative impact on the natural environment, but also to the quality of human health [2]. Locally, waste is not collected contribute to flooding, air pollution and public health impacts such as respiratory diseases, diarrhea, and dengue fever [1]. A total of 80 percent of the spread of illness in the community in developing countries is believed to be associated with poor urban waste management system [3]. Residents around the landfill in Sierra Leone suffer from diseases such as malaria, chest pain, diarrhea and cholera [4]. This is by itself become an additional problem for the population in developing countries are still struggling with a lack of clean water and food availability.

Sustainable Waste Management (SWM) stressed the need for a fundamental change of paradigm in waste management, from paradigm of collected-transported-disposed into paradigm of SWM which is based on waste reduction and waste handling. SWM is considered as an effective measure to reduce the cost of collecting, transporting, and disposing of waste [5]. SWM behavior is defined as efforts to reduce waste (reduce), reusing waste that is suitable to be used (re-use), recycling, and convert the waste into energy source (waste to energi).

Understanding and explain the SWM behavior can use the psychological theory approach on the relationship of attitudes and behaviors, especially a theory that can predict behavior. Theory of Planned Behavior (TPB) developed by Ajzen [6] widely



applied to explain the intention of which is the nearest antecedent of behavior, that the intention or the intention of a person to be a determinant of whether someone will do or not do certain behaviors.

According to Ajzen [6], the behavioral intention to implement SWM is measured through three determinants. The first determinant related to the individual's attitude towards SWM behavior, The second determinant with regard to how much the perceived social pressure to implement such behavior (subjective norm), and third determinant related to the perception of its controls in relation to the such behavior are referred to as perceived behavioral control (PBC).

Cheung et al [7] in his research stating determinant factors of the TPB was significantly able to predict the behavior of waste-paper recycling at students in Hong Kong. While Chaisamrej [8] states determinant of TPB, especially the PBC and the subjective norm is a potential predictor of paper recycling. However, the attitude is not a potential predictor of intention to behave paper recycling in Thailand but being a predictor in the US.

Padang as the largest city in West Sumatra, Indonesia facing the problem of waste that needs serious handling, which waste generation continues to increase every year. Based on previous studies reference the average urban waste generation is 0.0035 m<sup>3</sup> / person / day, equivalent to 0.9 kg / person / day. In 2013 with a population of 871 534 people are estimated daily amount of waste in the city of Padang reached 3.050 m<sup>3</sup> (784 tons), while only 400 tons / day (51%) of the generated waste can be transported to the landfill. Waste that has not been transported generally accommodated in a temporary disposal container which is located on the edge of the road, the angle fork in the road or a particular road. That condition can lead to negative impacts on the environment, because it creates unpleasant odors, reduce the smoothness of traffic, reducing the beauty of the city, it can even become disease.

SWM behavior should be the concern of everyone, from children to adults, rich or poor. The establish of a SWM behavior in primary school student that oriented to sustainable development can be a role model for the SWM behavior in the family and the environment. The relationship between attitudes, subjective norms, and PBC with the behavioral intention to implement SWM and the relationship of knowledge about SWM with the students attitude towards SWM is a problem that want to be obtain the answered in this study.

## 2 METHOD

This study used survey method with cross sectional design in which data is collected throughout the study variables at the same time. The study was conducted in the city of Padang in August to December 2014. Population is a state primary school students in the city of Padang, amount to 77,406 students. The number of samples in this study were 400 students who calculated the proportion of the hypothesis test formula. Sampling technique with multistage random sampling.

There are five variables used, such as knowledge, attitude, subjective norm, PBC, and intention. Data collection was conducted by questionnaire and interview. Inferential analysis in this study using Structural Equation Modeling (SEM). SEM are statistical techniques that allow testing of a relatively complex set of relationships simultaneously [9]. SEM is a combination of factor analysis and regression analysis and applied separately in the factor analysis (Confirmatory Factor Analysis) or simply regression analysis [10]. Results of the analysis are interpreted and then concluded in accordance with the purpose of the study and were given advice.

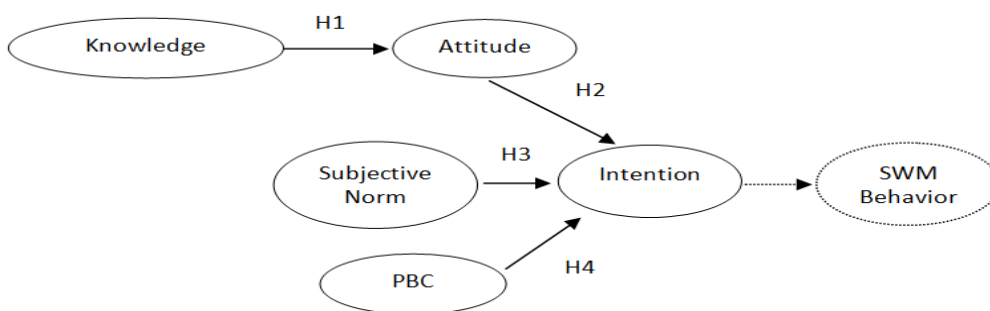


Figure 1 : The Conceptual Framework of Study

In accordance with the purpose, this study measuring the variables of the TPB to understand the behavioral intention to implement SWM using SEM. First of all, this study examined the relationship between knowledge about SWM with the students' attitude towards the SWM behavior (Hypothesis 1). Furthermore, this study analyzed the relationship between attitude and the behavioral intention (hypothesis 2), subjective norm and the behavioral intention (hypothesis 3), and PBC and the behavioral intention (hypothesis 4) as shown in figure 1.



### 3 RESULT

A total of 400 respondents from four primary schools in the city of Padang participated in this study. 54.5% of respondents were female and 45.5% male. 80% of respondents came from the eco schools and 20% more not from the eco schools.

#### 3.1 MEASUREMENT MODEL

Comparative analysis in this study follows the steps of SEM. Before forming Full Model of SEM, first testing the indicators that form each variable. Testing was done by using confirmatory factor analysis (CFA), which is used to test the validity and reliability of latent variables and indicators.

Table 1 shows the loading factor value for all items forming latent variables more than 0.5. This means that all indicators of these variables together present a unidimensional for each latent variable [10]. All of the Cronbach's Alpha (CA) values receipts exceed the limit of 0.7, and so does all of the variances extracted (VE) values acceptance limit of 0.5 [11]. Furthermore, based on confirmatory factor analysis, all of latent variables together all the indicator can be used for further analysis without any modifications or adjustments.

**Table 1 : Loading Factor, Cronbach's Alpha dan VE**

Variable	Indicator	Loading Factor	Cronbach's Alpha	Varians Extract (VE)
Knowledge	Knowledge about reduce	0,742	0,83	0,56
	Knowledge about reuse	0,648		
	Knowledge about recycle	0,616		
	Knowledge about waste to energy	0,753		
Attitude	Waste can be processed and sold	0,638	0,90	0,64
	Make a narrow	0,782		
	Take time to learn	0,775		
	Requires a lot of people	0,640		
	School uniforms get dirty	0,766		
Subjective Norm	Teacher	0,880	0,92	0,70
	Head Master	0,817		
	Friends that discipline	0,688		
	Parents	0,766		
	School Guard	0,618		
PBC	Tools and materials are inadequate	0,663	0,84	0,56
	There is no special place for activities	0,605		
	There are no specific learning	0,621		
	trash bin are smelly and dirty	0,753		
Intention	Intention to reduce	0,730	0,89	0,66
	Intention to re-use	0,794		
	Intention to recycling	0,711		
	Intention to convert the waste to energy	0,730		

#### 3.2 STRUCTURAL MODEL

SEM analysis was tested using AMOS 22 with maximum likelihood estimate (MLE). The test results are full model fit index showed sufficient conformity between the conceptual models with data obtained from the study as shown in Table 2. Value of Root Mean Square Error of Approximation (RMSEA), the absolute measure of the fit index parameters, equal to 0.06 within the tolerance limit of 0.08 [11]. The value of goodness of fit index (GFI) was 0.91 indicating acceptance within the



tolerance limit of 0.90 [11]. Ratio of chi-square ( $\chi^2$ ) and degrees of freedom (cmin / df) of 2.27 was obtained slightly above the cut-off value recommended [11]. In technical terms, these results suggest that there are no problems with the structural model. This means that this model can explain the intentions of SWM behavior in primary school students.

**Table 2 : Goodness-of-Fit Test Index**

Goodness of Fit Index	Cut off Value	Test Result	Evaluation
Chi Square	expected to be small	447,53	Marginal
Cmin/Df	≤2.00	2,27	Marginal
GFI	≥0.9	0,91	Good
TLI	≥0.95	0,92	Marginal
CFI	≥0.95	0,93	Marginal
RMSEA	≥0.08	0,06	Good

Results of analysis using the t test for regression weight generated by the model are presented in Table 3. All value of critical ratio (CR) which is identical with the t value in t-test > 1.96. This indicates received the whole model hypothesis in this study, which means that there is a relationship between knowledge and attitude and there is a relationship between attitude, subjective norm, and PBC with the behavioral intention.

**Table 3 : Summary of Structural Model**

Related			Standardized Estimate	CR	p-value
Attitude	<---	Knowledge	0,38	5,02	0,000
Behavioral Intention	<---	Attitude	0,19	3,61	0,000
Behavioral Intention	<---	Subjective Norm	0,23	4,00	0,000
Behavioral Intention	<---	PBC	0,40	5,96	0,000

#### 4 DISCUSSION

Results of this study stated that knowledge of SWM associated and contribute positively with attitudes towards SWM. These results are consistent with theoretical assumptions of TPB [6] and in line with the findings obtained by Ramayah et al [12] which explores the behavior of environmentally conscious recycling by using the TPB.

These results are also consistent with the studies of Kumar [13] which states that environmental knowledge related to attitudes towards environmentally friendly products. Communication and education efforts to increase knowledge of the issues associated with environmental concerns has been effective in encouraging behavioral dispositions that are considered good for the natural environment [14]. The results also support the findings of Cheung et al [15] that the general knowledge about the environment can significantly predict the behavior of paper recycled. However, different results reported by Chaisamrej [16] that the knowledge about recycling fails to be predictors of intention and recycling behavior in students in Thailand and the United States.

Knowledge about SWM is measured by five indicators consisting of knowledge about reducing waste, reusing waste, recycling waste and convert the waste into energy. The findings of this study states the better the students' knowledge, the better the students' attitude towards SWM. Need intensive and sustained effort from the schools to increase students' knowledge of SWM by including it as heavies in the curriculum of environmental education in schools.

Results of this study stated that the attitude towards SWM associated and contribute positively with the behavioral intention to implement SWM. These findings are consistent with theoretical assumptions in the TPB (6) that attitude is a determinant factor of intention. These results are also consistent with the results obtained with the same relationship and the same direction in the study reported by Chan and Lau [17] which stated attitude has a positive relationship with the intention to buy environmentally friendly products. Ramayah et al [12] in the results of his research on university students concluded that attitudes have a significant impact on recycling behavior. Similar results were also reported by Kumar (11),



which examines the behavior of buying environmentally friendly products stating that attitude has a significant relationship with the intention to buy environmentally friendly products.

Attitudes towards SWM is measured by five indicators as elicitation results. Students are asked to comment in the range of strongly disagree to strongly agree to a positive statement is that sustainable waste management makes waste can be processed and sold. As for the negative statement, the students asked to comment in the range of strongly agree to strongly disagree with the statement that SWM make the place into a narrow, time-consuming to learn, requires a lot of energy, and causes school clothes become dirty. More and disagree with the statement the higher the students intention to implement SWM behavior. The attitude of the students who do not agree with negative statements about SWM can be used as motivation for students so that SWM becomes fun activity.

Results of this study stated that the subjective norm associated and contribute positively with the behavioral intention to implement SWM. Subjective norm which refers to perceived social demands to perform or not perform certain behaviors found influence and contribute positively to the intention to implement SWM behavior in this study. These results are consistent with the theoretical assumptions of the TPB (6) which states that the subjective norm as the determinant factor to apply or not to apply certain behaviors. These results are in line with the findings of previous research that states that subjective norm has a significant relationship with the intention as reported by previous researchers [13,15,16]

The findings of this study based on the results of elicitation and validity and reliability stating there are five valid indicator for assessing subjective norm which is the people who are considered may affect students in applying or not applying SWM behavior at school. These people are classroom teachers, headmaster, friend whose discipline and good behavior, their parents and school guard. School management and policy makers can take advantage of their potential to improve the students' intention to implement SWM behavior.

Results of this study stated that the PBC associated and contribute positively with the behavioral intentions to implement SWM. These findings support the assumption in the TPB [6] that the intention is influenced by subjective norms. These results are consistent with the results of Kumar. which states PBC has a significant relationship with the intention to buy environmentally friendly products. These results are also consistent with the findings Mahmud and Osman [18] which showed that the PBC has a positive and significant influence on behavioral intention of recycling. Similar results were also reported by Chaisamrej [16] that the PBC affects the behavior intention of recycling paper. Cheung et al [15] also stated PBC relate to the behavior of waste-paper recycling.

PBC has the most contributed to the behavioral intention to implement SWM, followed by the subjective norm and the lowest contribution is the attitude towards the SWM behavior. PBC is a consideration factors for the students that facilitate or inhibit themselves to implement SWM behavior. There are four indicators used to measure the PBC which tools and materials are inadequate, there is no special place to implementation of recycling activities at school, the lack of specific learning about SWM, and trash cans were smelly and dirty. School management and policy makers in the basic education sector should make a rational consideration of these findings as to improve students intention to apply SWM behavior.

Overall the model that uses the framework of TPB capable of explaining intention of SWM behavior with good approach with simple and adequate way for developing countries like Indonesia. Eligibility of the theory of planned behavior is consistent with the findings of Kumar [13] and Ramayah et al [12]. There is a scarcity of research that studies the relationship of environmental knowledge with attitudes towards environmental issues in the context of Indonesia although the same thing has been studied in other geographical conditions such as by Kumar [13] in India and Ramayah et al [12] in Malaysia. The study also managed to fill this gap.

## **5 CONCLUSION**

This study uses a framework of TPB to investigate the behavioral intention to implement SWM on primary school students and its determinant factors. It is found that the better knowledge on SWM will be better attitudes towards SWM behavior. The better attitude towards SWM behavior the better the students' behavioral intention to implement SWM. Subjective norms as a reflection of social pressure from the people who are considered influential on students to apply or not to apply SWM behavior associated and contribute positively with the behavioral intention to implement SWM. PBC which is the perception of the ease or difficulty to implement SWM behavior are associated and contribute positively with the behavioral intention to implement SWM. The findings of this study support the concept of the TPB by adding constructs knowledge as a background's factor of formation of attitudes. Structural model of the behavioral intention to implement SWM on Primary school students in the city of Padang has good psychometric value (valid, reliable, and modeling fit).

The study provides a theoretical and practical implications of how attitudes, subjective norms, and PBC affects the behavioral intention to implement SWM. In efforts to implement SWM behavior on primary school students local



governments should pay attention to the determinant of the behavioral intention to implement SWM and their former indicators.

The Measuring tools of the behavioral intention to implement SWM and its determinant factors on primary school students in the city of Padang can be used by policy makers to assess the factors that influence of implementing the SWM behavior in a practical, economical, valid and reliable. Other researchers can develop a structural model of the behavioral intention to implement SWM by adding other indicators that could theoretically affect the determinants of the behavioral intention such as race or ethnicity.

## ACKNOWLEDGMENT

Our thanks goes to all those who have helped this research. Particularly to teachers at State Primary School (SDN) 03 Alai Timur, SDN 17 Gunung Pangilun, SDN 10 Sungai Sapih, and SDN 44 Kalumbuk.

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