

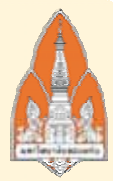


International Seminar and Workshop on Public Health Action

“Building Healthy Community”

Semarang, December 1-2, 2015

PROCEEDINGS



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on Public Health Action**
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P R O C E E D I N G S

**Faculty of Health Sciences
Dian Nuswantoro University**

PROCEEDINGS

**INTERNATIONAL SEMINAR AND WORKSHOP
ON PUBLIC HEALTH ACTION
BUILDING HEALTHY COMMUNITY**

Semarang, December 1-2, 2015

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PREFACE



Assalamu'alaikum Warahmatullahi Wabarakaatuh

Praise for almighty God for giving us healthy and opportunity to carry out the Seminar and Workshop on Public Health Action. This event provides forums for disseminating and exchanging multidisciplinary research results in public health action. It covers all aspects of public health sciences, such as health literacy and health promotion, health system management, disease prevention, health care, health management, health informatics system, epidemiology, environment and occupational health, epidemiology, reproductive and sexual health, others specific health theme as well. This is the appropriate forum for professionals to discuss how to transfer knowledge into action since public health is about how to make people have adequate healthy behavior. This forum also provides workshop in action research and side meeting in health literacy.

The paper presentation has solicited and gathered research submission related to all aspects of the seminar scope. All the submitted papers in proceeding were peer-reviewed by at least three international experts drawn from program committee scope. After the rigorous peer-review process, a total of 39 paper and abstract were reviewed on the basis of originality, significance, and clarity and were accepted for publication in the proceeding. The authors were from provinces in Indonesia and others countries; Thailand, Taiwan, and Korea.

The interesting ideas can be found when reading the contents of proceeding and will inspire participant to bring the theories of public health into action. The program has prepared well to favor interactions among attendance coming from different background.

We would like to sincerely thank to Rector of Dian Nuswantoro University, Dean of Faculty of Health Sciences Dian Nuswantoro University, all distinguished speakers: Prof. John Parrish-Sprowl, Ph.D, Prof. Dr. Peter WS Chang, MD, MPH, Dr. Wongsu Laohasiriwong, dr. Hartanto, M.Med.Sc, Affandy, PhD and Dr. Leo Prawirodihardjo SpOG, all participants and sponsors.

Wassalamu'alaikum Warahmatullahi Wabarakaatuh,

Committee,

Nurjanah, SKM, M.Kes

WELCOME REMARK



Welcome, Selamat datang,
Assalamu'alaikum Warahmatullahi Wabarakaatuh

Welcome to the Seminar and Workshop on Public Health Action in the theme of "Building Healthy Community" in Semarang.

This Seminar initiated by Faculty of Health Sciences Dian Nuswantoro University Semarang Indonesia. I would like thank to the Committee, who have been provide time and efforts to conduct this Seminar and workshop successfully on the 1st-2nd December 2015.

The Seminar and workshop aims to reflect global health trend, public health issues, and strategies being develop to impact health improvement in communities, especially disseminate health literacy in Indonesia.

This event is designed for students, practitioners, leaders and policy maker to learn and share their knowledge and best practices to enhance the quality of life and to address major public health challenges to delivery of education, increase knowledge and research in respond to SDGs era.

I would like to thank to our honorable speakers; Prof. John Parrish-Sprowl, Ph.D (Director of Global Health Communication Center, Indiana University, USA), Prof. Dr. Peter WS Chang, MD, MPH (Asian Health Literacy Association, Taiwan), Dr. Wongsu Laohasiriwong (Khon Kaen University, Thailand), dr. Hartanto, M.Med,Sc (Provincial Team Leader Central Java USAID EMAS), Dr. Leo Prawiradiharja (JHPIEGO Indonesia), Affandy, PhD (Dian Nuswantoro University).

I hereby extend my sincerely thank to each of you to be apart to this Seminar and workshop. I wish you a pleasant stay in Semarang and have a great successful seminar and workshop.

Wassalamu'alaikum Warahmatullahi Wabarakaatuh
Thank you very much,

Dr. dr. Sri Andarini Indreswari
Dean of Faculty of Health Sciences
Dian Nuswantoro University

WELCOME REMARK



Assalamu'alaikum Warahmatullahi Wabarakaatuh,

Firstly may we made our highest praise and thank Allah, The Almighty for his bless so that we are able to come joint this precious event. It gives me a great pleasure to welcome all of you to “Seminar and Workshop on Public Health Action” organized by Faculty of Health Sciences Dian Nuswantoro University.

On behalf of Dian Nuswantoro University I would like to express our sincere appreciation and heartfelt thanks to distinguished speakers Prof. John Parrish-Sprowl, Ph.D (Director of Global Health Communication Center, Indiana University, USA), Prof. Dr. Peter WS Chang, MD, MPH (Asian Health Literacy Association, Taiwan), Dr. Wongsu Laohasiriwong (Khon Kaen University, Thailand), dr. Hartanto, M.Med,Sc (Provincial Team Leader Central Java USAID EMAS), Dr. Leo Prawiradiharja (JHPIEGO Indonesia), Affandy, PhD (Dian Nuswantoro University), and all of participants as well.

Health is a very important for daily life. Without health, we cannot live productively even spend a lot of money for medical treatment. Building healthy community is very important and it needs collaboration between government, private sector, academia and community. We need to discuss it together to make it real. Dian Nuswantoro University is proud of being important part to develop public health in Indonesia through activities conducted in this event.

I am convinced that the seminar, workshop, scientific meeting and paper presentation produce valuable result for improving public health. I hope you find the seminar sessions and program materials in framing the direction of your work. I am sure that the effort made by all organizing committee will make it a definite success and valuable experience for participants.

Enjoy this Seminar and enjoy Semarang !

Wassalamu'alaikum Warahmatullahi Wabarakaatuh,

Dr. Ir. Edi Noersasongko, M.Kom

Rector of Dian Nuswantoro University

AGENDA of SEMINAR AND WORKSHOP ON PUBLIC HEALTH ACTION

1-2 December 2015

Pre Seminar, 1 December 2015 Dian Nuswantoro University, Jl. Imam Bonjol 205-207 Semarang				
Time	Side Meeting Health Literacy (Meeting Room G1)		Workshop 1 How to run Action Research (Meeting Room H1)	
07.30-09.00	Registration			
09.00-12.00	<ul style="list-style-type: none"> ▪ Improving health literacy; who have to take actions ▪ Introducing Diabetes Literacy Program 	Speaker: Prof. Dr. Peter WS Chang, MD, MPH Participants: Deans, Health office, research board	Workshop	Prof. John Parrish-Sprowl, Ph.D
12.00-13.00	Lunch			
13.00-15.00	Fieltrip RSUD Tugurejo (invitation only)			
18.30-21.00	Welcome Dinner Rector, Deans, Speakers, Committee			
Seminar "Building Healthy Community" 2 December 2015 Venue: Grasia Convention Hall, Jl. Guntur 7 - 9 Gajahmungkur SEMARANG				
07.30-08.00	Registration			
08.00-09.00	Opening <ul style="list-style-type: none"> ▪ E-gamelan ▪ Indonesia Raya ▪ Welcome remarks ▪ Opening speech ▪ Praying ▪ Photo Session : Rector, Vice Rectors, Deans, Speakers, Committee 	Nurjanah, SKM, M.Kes Rector of UDINUS (Dr. Edi Noersasongko, M.Kom Suharyo, SKM, M.Kes		
09.00-09.15	Coffee break			
Session 1 (Moderator : Eti Rimawati, SKM, M.Kes)				
09.15-09.35	Building healthy policy	Dr. Wongsu Laohasiriwong (Khon Kaen University)		
09.35-09.55	Health literacy as a important determinant of health	Prof. Dr. Peter WS Chang, MD, MPH (Asian Health Literacy Association)		
09.55-10.15	IT supporting healthy community	Affandy, Ph.D (Dian Nuswantoro University)		
10.15-10.45	Q & A			
10.50-11.00	Dance for life			
Session 2 (Moderator : Dr. dr. Sri Andarini Indreswari, M.Kes				
11.00-11.20	Communicating healthy behavior	Prof. John Parrish-Sprowl, Ph.D (GHCC, Indiana University)		
11.20-11.40	The role of EMAS to empower community in reducing child and maternal death	dr. Hartanto, M.Med,Sc (Provincial Team Leader Central Java USAID EMAS)		
11.40-12.00	Family planning challenges in BPJS Era	Dr. Leo Prawiradharja (JHPIEGO)		
12.00-12.20	Q & A			
12.30-12.40	Announcement for parallel session			
12.40-13.30	Lunch			
13.30-15.30	Parallel scientific presentation			

Parallel A (Moderator: Maryani Setyowati, SKM, M.Kes, Notulen: Sri Handayani, SKM, M.Kes; Retno Astuti S., SS, MM)		
13.00-13.15	Enny Rachmani	Is health literacy equal with e-health literacy scale among leprosy staff at Pekalongan District's Public Health Center, Indonesia
13.15-13.30	Almas Awanis	The Relationship between Knowledge, Attitude and Action of Parent about Gross Motor Stimulation to The Ability Walk of Children
13.30-13.45	Andi Anwar	Analysis of Public Health Degree on The Archipelago/Island Communities Derawan Island Regency Districts Berau
13.45-14.00	Fia Aprianti dan Budiman	Related Knowledge and Attitude about Women Children Family Conscious Nutrition (KADARZI) with Nutritional Status of Children in The Gekbrong Village Gekbrong District 2015
14.00-14.15	Supat Assana	Educational Stress and Depression among High School Students in the Northeast of Thailand
14.15-14.30	Sukanya Kansin	Child rearing practices for children at their first year of life: finding from the Prospective Cohort Study of Thai Children
14.30-14.45	Heru Subaris K	Level of Mother's Knowledge and Attitude about Healthy and Clean Life Behavior (PHBS) within Sick Building Syndrome in Permanent House of Dusun Karangkendal, Umbulharjo, Cangkringan, Sleman, Yogyakarta
14.45-15.00	Swanny Tri kayanti	A Study on Inhalation of Air Pollutant Material and Mouth Breathing Correlation On Mouth Breathing And Life Expectancy
15.00-15.15	Nurjanah, Lakhmudien	Perception of UDINUS Student about Pictorial Health Warning (PHWs) on Cigarette Pack
Parallel B (Moderator: Kismi Mubarakah, SKM, M.Kes, Notulen: Dr. MGC Yuantari, SKM, MKes; Vilda Ana V, SGz, MGz)		
13.00-13.15	Sarah Astari and Sutopo Patria Jati	Analysis of Stakeholders Partnership in Prevention and Traffic Accidents Control (Indonesia Orderly United towards Safety Number 1 in Semarang Year 2015)
13.15-13.30	Ratna Setyaningrum	The Correlation between Age, Tenure, and Height with Musculoskeletal Disorders Complaint (Observational Study among Brick Craftsman in Lok Buntar Village Sungai Tabuk District)
13.30-13.45	Anita Dewi Prahastuti Sujono	Occupational Safety and Health on Tourism Sector Toward Asean Economic Community
13.45-14.00	Rani Imran	Macroergonomics for Integrated Public Health and Safety
14.00-14.15	Evi Widowati	Needs Analysis Of Fire Management System in Campus
14.15-14.30	Ida Wahyuni	The Influence of Work Posture to The Musculoskeletal Disorder On Laundry Workers in Tembalang Region
14.30-14.45	Ratih Pramitasari	Association between Ergonomic Risk Factors and Work-Related Musculoskeletal Disorders in Beverage Factory Workers, Indonesia.
14.45-15.00	Ratna Dian Kurniawati	Relationship Between Heat Pressure With Changes in Blood Pressure On Workers in The PTPN VIII CIATER SUBANG YEAR 2015
15.00-15.15	Paricha Nippanon	Factors Associated with Quality of Life of Rubber Farmers in Northeast Thailand
15.15-15.30	MG Catur Yuantari	Behavior of melon farmers in using personal protective equipment as a protection effort of pesticide poisoning

Parallel C (Moderator: Nurjanah, SKM, M.Kes, Notulen: Eni Mahawati, SKM, M.Kes, Dyah Ernawati, SKp, M.Kes, Ns		
13.00-13.15	Rudi Fakhriadi	Factors Associated with Infectious Disease Acute Respiratory Infections (ARI) to Children in The Area Work of Bukit Hindu Palangkaraya Public Health Center
13.15-13.30	Mutalazimah	Thyroid Function Disorder and Quality of Life on Childbearing Women in Endemic Areas of Iodine Deficiency
13.30-13.45	Kusuma Estu Werdani	Factors Associated with the Hypertensions in Young Adulthood in Puskesmas Sibela Surakarta
13.45-14.00	Mr. Atthawit Singsalasang	Income, education, geographic disparities and hypertension in Thailand: Results from the National Socioeconomic Survey
14.00-14.15	Amornrat Luenam	Socioeconomics disparities and chronic respiratory diseases in Thailand: the National Socioeconomics Survey.
14.15-14.30	Chalobon Treesak	Impact of Socioeconomics Disparities on Cardiovascular Diseases in Thai Population: The National Socioeconomics Study
14.30-14.45	Kritkantorn Suwannaphant	Influences of Socioeconomic Determinants on Diabetes Mellitus: The National Socioeconomics Survey, 2012
14.45-15.00	Dian Nurmayanti	The Difference of Stroke Non Hemorrhagic Patients on Length of Stay and Cost of Treatment Before and After Clinical Pathway Implementation at Panti Rapih Hospital
15.00-15.15	Anisa Catur Wijayanti	Relationship Between Personal Hygiene , Toilet Conditions of family and The Information Received with The Incidence of Typhoid Fever in Puskesmas Nogosari Boyolali
15.15-15.30	Heri Sugiarto	Developing Wall Clocks as Health Promotion Media for Housewife Target in The Prevention of Dengue Hemorrhagic Fever (DHF) in Indramayu
Parallel D (Moderator Eti Rimawati, SKM, M.Kes, Notulen: Suharyo, SKM, M.Kes, Silvia Anjani, SKM)		
13.00-13.15	Nita Pujianti	The Impact of Implementation UDD System to Pass Care Patient Satisfaction in Jogja International Hospital
13.15-13.30	Feby Erawantini	Implementation Of Electronic Medical Record in Clinical Education of State Polytechnic of Jember
13.30-13.45	Husaini	Sstudents' Knowledge Difference Before and After Giving SD Information on The Behavior of Clean and Healthy Living
13.45-14.00	Hadi Siswanto	Environment Health as a Strategic Action for Wellbeing
14.00-14.15	Arip Ambulan Panjaitan	Consistency in The Use Of Condoms On People Living with HIV/AIDS in District Sintang
14.15-14.30	Husaini	Related Knowledge and Attitude towards Women Booster Immunization Toddlers Health Work in Sungai Ulin 2015
14.30-14.45	Sri Handayani	Knowledge of Toddlers' Mother on Reproductive Health in Mijen District of Semarang City
14.45-15.00	Arip Ambulan Panjaitan	Behavior Of Female Sex Workers (FSW) in Prevention STIs and HIV/AIDS in District Sintang
15.00-15.15	Sri Setyati	Policy Strategy In Terms Of Increasing Reproductive Health In Barito Kuala District
15.15-15.30	Vilda Ana Veria Setyawati	Effect of Nutritional Education on Nutritional Knowledge of Elementary Student
15.30-16.00	Award & Closing	Dean of Faculty of Health Sciences Dian Nuswantoro University

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SPEAKERS

1. **John Parrish-Sprowl, Ph.D**

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ACADEMIC POSITIONS

Current

- **Professor**, Department of Communication Studies (2000-)
- **Director**, Global Health Communication Center (2006-)
- **Adjunct Faculty**, Women's Studies
- **Member of the Faculty**, University College
- **Member of the Faculty**, Russian & Eastern European Institute

Current Professional Affiliations

- **Associate**, CMM Institute
- **Research Associate**, Center for Intercultural New Media Research
- **Member**, National Communication Association (Past Chair, Applied Communication **Division (twice)**, NCA Legislative Council (twice), frequent paper reviewer)
- **Member**, Center for Intercultural Dialogue
- **Member**, Health Systems Global
- **WHO Roster of Experts**, Social and Behavioral Change

Previous Academic Positions

- **Chair and Professor**, Department of Communication Studies, Indiana University-Purdue University Indianapolis (2000-2005)
- **Chair and Associate Professor**, Department of Communication, Indiana University Purdue University Fort Wayne (1995-2000)
- **Visiting Professor**, Institute of Sociology, University of Wroclaw, Wroclaw Poland
- **Visiting Professor**, Institute of Economics and Social Science, Wroclaw Technical **University, Wroclaw**, Poland (both Poland visiting positions, 1993)

Expert Witness

- Served as an expert witness on communication for the states of Arizona, Florida, Oklahoma, Texas, and Washington in their lawsuits against the tobacco industry.

2. Professor Peter Wushou Chang, MD, MPH, ScD, FRCP

Education

- M.D., Department of Medicine, National Yangming Medical College (1977-1984)
- M.P.H., Master of Public Health, occupational health major, Department of Environmental and Occupational Health, Harvard University, School of Public Health (1987-1988)
- Sc.D., Laboratory of Radiobiology, Department of Cancer Biology, Harvard University, School of Public Health (1988-1992)

Professional/ academic appointments and experiences

- Director-General, Bureau of International Corporation, Ministry of Health, Taiwan (Aug., 2004-Aug. 2007)
- Advisor, Committee of International Affairs, Taiwan Medical Association (TMA; Oct 2004~)
- Advisor, Committee of International Affairs, Formosa Medical Association (FMA; Aug., 2005)Board,
- Advisor to Taiwan Ministry of Health on EU and BelgiumAffairs in Brussels (Aug.,2007~Aug. 2009)
- Co-coordinator, European Commission, Framework Program 7 (FP7), Health National Contact Point (Health NCP), (2009.11~)
- FRCP, FPH (Fellow in Public Health), Royal College of Physician (April, 2011~)
- Vice Dean, College of Public Health and Nutrition, Taipei Medical University (Sep.2011~)
- Visiting Professor, BogdanVogaUniversity, Cluj-Napoca, Romania (Sep., 2011~)
- Editorial Board, Education Studies (Oct., 2011)
- Delegate to the Confederation of Medical Associations in Asia and Oceania, CMAAO, 2009 (Bali), 2011 (Taipei).
- Board, New Taipei City Asian Educational, Scientific, and Cultural Organization (AESCO; Dec. 2014~)
- Committee, National Scholarship 2015, Ministry of Education (Jan. 1, 2015 ~)
- Advisor, visiting professor, Kazakhstan National Medical University, Almaty (June 2014~)
- Committee member, Low carbon sustainable living environment, Environmental Protection Administration (EPA), Jan. 2014-Dec 2014.
- Advisory Committee member, Low carbon and green0house-gas reduction Strategies; Environmental Protection Administration (EPA), Jan. 2015~.

3. Associate Professor Dr. Wongsu Laohasiriwong, Ph. D. (Public Sector Management), MPH.

Academic Position:

- Associate Professor, Level 9 Department of Public Health Administration Faculty of Public Health Khon Kaen University, Thailand

Administrative experiences:

- Associate Dean for Academic Affairs: (2001 –2002)
- Associate Dean for Foreign Affairs (2002-2004)

- Associate Dean for Special Affairs: (2007-2008)
- Vice Dean for International Relations and Cooperation Strategies (2011- present)

Academic Experiences:

- Chairperson of the Board Committee of the Doctor of Public Health Program (International program); (2009 - present)
- Chairperson of the Board Committee of the Doctor of Public Health Program (International program); (2009 - present)
- Chairperson of the Board Committee of the Doctor of Philosophy in Public Health (International program); (2008 - present)
- Board committee member of the Master of Rural Development Management Program; (2003- present)
- Board committee member of the Master of Public Health (Public Health Administration) (2003- present)
- Board committee member of the Master of Public Health(International Health); International program,

4. Affandy, PhD

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Educational Background

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Research and Professional Experiences

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- Secretary in bachelor programme of Information Technology, University of Dian Nuswantoro Semarang, from 2005 – 2008
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Research

- H-Index google scholar = 2, 2015
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Education

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Trainings and Courses, In Country and Overseas:

- Primary Health Care Management, 15-28/3/1981, BLKM Salaman, Magelang, Central Java
- Leadership Training 4th Level, 22/9 – 22/12 1990, BLKM Salaman, Magelang, Central Java
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- Leadership Training 3rd Level, 1st Batch, 12/6 – 9/9/1995, Center of Training and Education, MOH, Jakarta.
- HIV/AIDS RESEARCH, 9/1 – 6/4/2001, Brown University, Providence, RI, USA
- Leadership Training 2nd Level, 2nd Batch D Class, 2001, 9/7 – 8/9/2001, Public Administration Institute, Bandung, West Java
- Mater Health Services Professional Development Program, Mater Misericordiae Health Services and Queensland University of Technology, Brisbane, 5 – 12 December 2005
- Emergency and Disaster Health Management Training Program, Queensland University of Technology, Brisbane, 31 July – 4 August 2006
- Surveyor Training of Hospital Accreditation 10th Batch, Hospital Accreditation Committee, MOH, 2010
- Training of Trainer for District Health Manager at Center of Training and Education, MOH, 25-20 July 2011

Job experiences:

- Head of Community Health Center, Magelang Regency, Central Java 1981-1991
- Head of Primary Health Care Section, Provincial Health Office of Central Java, 1991-1994
- Head of Regency Health Office of Purbalingga, Central Java, 1995-1997

- Head of Health Workforce Division , Provincial Health Office of Central Java, 1997-2003
- Director of Margono Soekarjo Provincial Hospital of Central Java, Purwokerto, 2003-2007
- Head of Provincial Health Office of Central Java, 2007-2009
- Amino Gondo Hutomo Mental Hospital, Semarang, 2010-2011.
- BUNDA Maternity Hospital, Semarang, 2011-2012.

Current Jobs:

- Provincial Team Leader, USAID EMAS, Central Java
- Lecture of Post Graduate Program of School of Public Health of Diponegoro University, Semarang (Public Health Administration and Health Promotion)
- Lecture of Post Graduate Program of School of Law of Soegiapranata Catholic University, Semarang (Health and Medical Laws)
- Team Training of Executive Leadership and Health Management of East Nusa Tenggara Province, Center of Health Service Management , Medical Faculty, Gajah Mada University, Yogyakarta
- Member of Governing Body of Provincial Hospital Of Central Java
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- Trainer of Competency Training for District Health Manager, Center of Training and Education of MOH

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- Member of Local Public Hospital Association (ARSADA) Central Java
- Member of Indonesian TB Control Association of Central Java
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- Member of Indonesian GP Association, Central Java
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 Ph.D : Universiti Tun Abdul Razak, Malaysia, Manajemen
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Work Experience

- The Head of Public Health Services of Nanga Tempunak, Sintang, KalBar
- Director of Regional Hospital of Ajjapange Soppeng, SulSel

- The Chairman of Bid YanMed at Regional Hospital of Labuang Baji, Prov SulSel
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Organization experience:

- The Vice Secretary of Dewan Pertimbangan Pusat PB POGI
- The Head of POKJA Kemitraan Bidan PB POGI
- The 1st Chairman of PERSI in South Sulawesi
- The Head of Indonesian Epidemiology Expert in South Sulawesi
- The Chairman of Social Obstetric Gynecology Association in South Sulawesi
- The Committee of Indonesian Social Obstetric Gynecology Association
- The IDI Chairman of Soppeng, South Sulawesi

NEEDS ANALYSIS OF FIRE MANAGEMENT SYSTEM IN CAMPUS (CASE STUDY IN SPORT SCIENCE FACULTY, SEMARANG STATE UNIVERSITY)

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Abstract

Fires can occur anywhere, including in the workplace. Faculty of Sport Science, State University of Semarang, consists of 4 main buildings, namely building as Dean building (F1), F2 as the lecture building, F3 as the Multipurpose Building, library and lecture and F4 as laboratory building exercise and health. In the building F1, F2 and F3 are potential fire hazards caused by the material combustible fuel (such as paper, wood and plastic), the heat source coming from an open flame (the kitchen stove) and electrical installations which may experience a surge as well of course there is oxygen in the room. These three factors are part of the fire triangle.

The study design used is descriptive comparative case study research design. This study used a comparative descriptive research design for this study with the primary objective to create a picture or a description of a situation objectively and compare the real conditions in the field with the various rules relating to fire management systems.

From this study it can be concluded that in the Faculty of Sport Science only has a fire protection system of passive compliance with the standards because the major components of building structures in accordance with the standards of material quality level I, while at other points all not in accordance with the standards that are used, these points are: planning (emergency warning systems, evacuation management systems, emergency communications, medical teams, termination procedures and the security operations); organization (the role of fire officers, fire fighter team, fire prevention coordinator unit, a fire prevention OSH expert); Evacuation means (exits, emergency stairs, emergency lighting, directional and emergency signs, corridors, point gather); Active fire protection systems; inspection and supervision; and training.

Advice given include: forming an emergency response team at the Faculty of Sport Sciences or emergency response team (ERT) which will handle all aspects of safety in the Faculty of Sport Sciences, prepare ERT became operational teams which there is consist a fire fighter team also, giving capacity building to ERT team designated safety related aspects of either theoretically also practically and certifications in OSH aspects, hereinafter designated ERT team to construct a system of prevention and control of fire hazards in the Faculty of Sport Sciences comprehensively.

Keywords : fire, management, prevention.

A. Introduction

Aspects of Occupational Health and Safety (OSH) is generally considered a low priority in a government agency. In the sector of government agencies, there are many sources of potential hazards that can lead to accidents, including a fire hazard. Fire contains a good variety of potential dangers to humans, property and the environment. Fire is an uncontrolled incident,

that can cause material and soul losses also the environment damage (Ramli, 2010:16).

The Central Bureau of Statistics Central Java (2013), explains that the number of fires in Central Java from 2010 to 2013 intend to a fluctuating rise. In 2010 a fire occurred 758 cases, in 2011 a fire occurred 1,282 cases, 1,800 cases occurred in 2012 and 2013 fires occurred 1,586 cases of fire. While the number of cases of fires in the city of Semarang from 2011 to 2013

the number is a fluctuating increase (Semarang City Fire Department, 2013). In 2011, a fire occurred 214 cases, 255 cases in 2012, in 2013 occurred 211 cases.

In the Journal of the NFPA Fire Analysis and Research said that the fire cases in the building of houses and buildings of homes in the United States from 2006 to 2010, US Fire Department expects a 5230 fire incidents with a total of 220 victims. Of the total 5230 fire cases, 3140 cases of fires (60%) occurred in the building in addition to the home, while 2090 cases of fires (40%) occurred in the house. Of the total 3140 cases of fires in buildings other than houses, as many as 1225 cases (39%) caused by a welding torch, a total of 1319 cases (42%) were caused by scissors torch, as many as 345 cases (11%) due to the burner, and as many as 251 cases (8%) are caused by soldering equipment (Evarts, 2012: 1).

Official data from the United States National Fire Protection Association (US NFPA), published in 2008 describes losses resulting from catastrophic fires. From an average of 350,000 times the catastrophic fires in residential areas and offices that occur in a year, 15,300 times the incidence of fires in high-rise buildings across the United States with an average of 60 died, 930 were injured and 52 million dollars losses burned catastrophic fires in that high rise buildings (Arief S, Endo W.K., 2008).

Fires also occurred in Indonesia, including of building a college campus, there are at least data about fires at two campuses in Jakarta. The first on campus Perbanas in the Kuningan area although no fatalities have been devouring the seventh floor. Archive room, meeting room and study room burned. In 2001, seminars and research room in the building Dean Faculty of Engineering University of Indonesia, Depok messy due to fires. Although there were no casualties but the incident has disrupted the operation of the campus. Both known to be caused by an electrical problem in the electrical installation (Arief S, Endo WK, 2008). Fires also take place on the campus of University of Indonesia in Depok on January 7, 2014, resulting in Building C FISIP burn and scorch sociology book collection of about 3,000 pieces (Ferdinand

Waskita, Tribunnews.com, 2014). Later fires also happen on Polytechnic Ujung Pandang, Makassar. Kebakaran occurred on March 22, 2015, there were no casualties. (Imran Samsad, Tribunnews.com, 2015).

Fires can occur anywhere, including in the workplace. Faculty of Sport Science, Semarang State University, consists of 4 main buildings, namely building as Dean F1, F2 as the lecture building, F3 as the Multipurpose Building, library and lecture and F4 as laboratory building for exercise and health. In the building F1, F2 and F3 are potential fire hazards caused by the material combustible fuel (such as paper, wood and plastic), the heat source coming from an open flame (the kitchen stove) and electrical installations which may cause friction as well of course there is oxygen in the room. These three factors are part of the fire triangle. According to the theory of the fire triangle, a fire occurred due to three factors, namely fuel, heat source, oxygen (Ramli, 2010: 16). While the building F4, besides having the same potential by building fires F1, F2 and F3, F4 on the building there is an additional source of fire danger in the form of chemicals such as alcohol and methanol are flammable and potentially cause an explosion.

According to Law No. 1 1970 Article 3 of the Safety, noted that the work required to prevent, reduce and extinguish the fire. To prevent fires management must controlled any potential of fire. Management of potential fire hazard is not enough just to provide fire-fighting equipment to extinguish the fire or do exercises that are conducted regularly, but requires a well-planned program in a system. Therefore, the fire must be properly managed and planned to implement a fire management system in accordance with applicable regulations. Fire management system is a concerted effort to manage the risk of fire through the planning, implementation, monitoring and follow-up (Ramli, 2010:140). From that background made the Occupational Safety and Health department on Semarang State University propose the research proposals Needs analysis of fire management system in campus (Case study in Sport Science Faculty, Semarang State University).

1. Formulation of the problem
Based on this background, it can be formulated problem in this research is: needs analysis of fire management system in campus (Case study in Sport Science Faculty, Semarang State University)."
2. Research purposes
The aim of this study is to describe the needs in the application of fire management system for prevention of fires in campus (Case study in Sport Science Faculty, Semarang State University).
3. Benefits of research
This research could provide theoretical benefits that can enrich the scientific field of Public Health, especially the Occupational Safety and Health (OSH) department at the Semarang State University. On the other hand provide the opportunity for students to participate actively involved in OSH research between lecturer and college student.
4. Theoretical Overview
Fire is an uncontrolled event, that can cause material and soul losses, also cause the environment damage (Ramli, 2010:16). Meanwhile, according to Anizar, fire is an event that is very fast and not desired (Anizar, 2012:14).

1) Causes Fire

Fires can be caused by human factors and technical factors (Ramli, 2010: 6). According Anizar (2012: 24) the cause of the fire caused by two factors, namely human error/unsafe action and unsafe condition. Unsafe action occurred because of human negligence and lack of professionalism in work. While unsafe condition is more directed to the object and the environment from human work that is unsafe or equipment that does not meet the standards. According to B. Boedi Rijanto (2011: 83) there are 7 factors that are able to trigger the cause of the fire are: electrical equipment, smoke, friction, open fire, spontaneous ignition, domesticity home (housekeeping), and air is explosive.

2) Triangle Fire

According Anizar (2012:22), Fire is an exothermic chemical reaction accompanied

by heat generation or heat, light (flame), fumes, gases, and the burning material. The combustion reaction requires three elements, namely the fuel as a material or substance which is wholly or partly undergo chemical and physical changes when it burns, heat early as the energy levels of the material to burn at temperatures of fuel (the lowest temperature when the substance started to burn), and oxygen as a chemical element burner.

Fires can occur due to three factors which are forming elements that fuel fire (fuel), the heat source (heat), and oxygen. The third element is known as the Triangle Fire theory. Without any one of these elements, the fire could not occur (Ramli, 2010:16).

B. Method

This research uses descriptive research design with a comparative case study research design. This research uses descriptive research design comparative because this study with the primary objective to create a picture or a description of a situation objectively and compare the real conditions in the field with the various rules relating to the system of fire management, the goal of this research is to understand something behind the phenomena to obtain something new insight (Anselm Strauss & Juliet corbin, 2009:4). Also to create a picture of the situation or event (Nazir, 2009:55). Using a case study design because the design is used to analyze an event/certain cases that occur in the community.

C. Results and Discussion

From interviews and observations that have been made it can be seen that faculty has only a passive fire protection system in accordance with the standards because the major components of building structures made of brick and iron frame (material quality level I); cover layer materials for the building is cement; material columns/beams made of bricks and cement, brick roofs of tile, flooring and stairs of brick, cement and ceramic (material quality level I); floors and stairs are made of brick, cement

and ceramics and the distance between buildings of approximately 5-10 meters.

But in general the faculty has not have fire prevention and control system that is comprehensive, and standards were:

1. Planning {emergency warning systems, evacuation management system (for example: evacuator team, SOP evacuation, evacuation maps, exit directions, and a assembly point), emergency communications, medical teams, discontinued operations and the security procedures}.

In the absence of a comprehensive emergency warning system it is possible to turn up to a fire and casualties or material because there is no system that can identify potential fire, preventing fire to overcome the danger of fire. Emergency warning is done by shouting, and even then made spontaneously from residents who do not clear SOPs and command system.

On the other hand the communication is done with outside agencies only use the phone, it does not conform with the standards because if people only use a mobile phone they have very high possibility of failure of communication such as: on "busy" mode, low battery, lagging or other reasons, too unavailability number relevant agencies on the mobile phone. Emergency communications so desperately need special communication tool with special teams and SOPs

2. Organizational (fire fighter officers, fire fighter team, coordinator of fire fighting, OSH fire prevention expert).

In sport science faculty have not formed organizations or units of fire-fighting which include: the fire fighter officers, fire fighter team, coordinator of fire fighting, OSH fire prevention expert) at faculty, so there is no division of roles during a fire.

In the absence of fire-fighting organization or unit in case of fire disaster then it is possible will appear casualties and significant material losses due to the lack of personnel who will perform fire fighting and rescue the occupants.

3. Evacuation means {means of rescue: the exit, emergency stairs, emergency lighting, directional and emergency signs, maps, corridors, assembly point}.

The absence of evacuation system makes building occupants will potentially become victims because besides they do not know the evacuation routes, they also do not know what should they do, where they would get together and who will ensure there are personnel who will help rescue their souls including calculating the occupants in assembly point for make sure there are no occupants remain inside the building.

On the other hand the absence of evacuation facilities such as: emergency exits, emergency stairs emergency lighting, directions and maps of evacuation make high probability of fatalities because of the high complication factor for the occupants to get out of the building in a relatively short time.

4. Fire protection system {active protection system}.

In sport science faculty has not had an active fire protection in the form: alarms, fire extinguishers, hydrants and sprinkler. Fire extinguisher available in the laboratory it is only for instructional materials not as active protection efforts. In the absence of active protection system fire then certainly there are no adequate facilities that can be used internally at faculty to extinguish a fire, so if fire happen could potentially lead disaster at faculty remember faculty has some potential danger of causing a fire for example: materials fuels (such as: paper, wood, furniture, etc.), oxygen is definitely available naturally, and heat (derived from: an open fire/stove, electrical or heating chemicals in a laboratory that has a low level on their flash point).

5. Inspection and supervision

In the Faculty of Sport Science is not done check/inspections and maintenance on all components of the fire protection system and means rescue periodically so that nobody can be certain that the personnel responsive and capable of performing rescue and fire fighting, or make sure the facilities

and infrastructure that exist today is it still worth used or not.

6. Drilling

In the Faculty of Sport Science there has been no fire prevention exercise program or simulation (drill) systematically and periodically. So if there is a fire disaster no personnel capable of performing rescue efforts outage or occupants because they are not trained intensively. Similarly, the inhabitants of buildings, they have not trained to perform self-rescue efforts in the fire disasters because they do not know both theoretically and practically related things to do during a fire disaster occurred.

D. Conclusion

In the study entitled "**Needs analysis of fire management system in campus (Case study in Sport Science Faculty, Semarang State University)**" can be concluded that faculty has only had a passive fire protection system as a major component structure building in accordance with the standards of material quality level I, while on other points such as:

1. Planning (emergency warning systems, evacuation management systems, emergency communications, medical teams, discontinued operations and the security procedures);
2. Organization (fire fighter officers, fire fighter team, coordinator of fire fighting, OSH fire prevention expert);
3. Means of Evacuation (exits, emergency stairs, emergency lighting, directional and emergency signs, corridors, assembly point);
4. Active Fire Protection Systems;
5. Inspection and supervision;
6. Training/drilling.

All of them have not meet the standards used, among others: Kepmen PU No.02/KPTS/1985; Permenaker No.Per 04/Men/1980; Kepmen PU 02/KPTS/ 1980; Kepmenaker 04/1986; Kepmenaker 186/Men/1999; Kepmen PU 10/KPTS/2000; SNI-03-1746-2000; Permen PU 26/Prt/M/2008; NFPA 10, 13, 14, 72; OSHA because in general, faculty does not have fire prevention and control system as the requirements.

Recommendations

Advice can be given in the study entitled "**Needs analysis of fire management system in campus (Case study in Sport Science Faculty, Semarang State University)**", among others:

1. Formed emergency response teams as the first step, because the emergency response team (ERT) will handle all aspects of safety aspects in the faculty.
2. Develop ERT be operational teams which has high capacity as a fire fighter team.
3. Provide capacity building to the ERT team designated safety related aspects of either theoretically or practically and certifications in OSH.
4. Designated ERT further develop systems of prevention and control of fire hazards in faculty comprehensively manner in accordance with the standards, among others: Kepmen PU No.02/KPTS/1985; Permenaker No.Per 04/Men/1980; Kepmen PU 02/KPTS/ 1980; Kepmenaker 04/1986; Kepmenaker 186/Men/1999; Kepmen PU 10/KPTS/2000; SNI-03-1746-2000; Permen PU 26/Prt/M/2008; NFPA 10, 13, 14, 72; OSHA. Prepared system includes:
 - a. Planning (emergency warning system, evacuation management systems, emergency communications, medical teams, discontinued operations and the security procedures);
 - b. Organization (fire fighter officers, fire fighter team, coordinator of fire fighting, OSH fire prevention expert);
 - c. Means of evacuation (exits, emergency stairs, emergency lighting, directional and emergency signs, corridors, assembly point);
 - d. Active fire protection systems;
 - e. Inspection and supervision;
 - f. Training/drilling.

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