



PROCEEDING Surabaya International Health Conference 2017



Optimizing Health Care Quality
Through Research, Clinical
Treatment and Education

Best Western Papilio Hotel
July, 13th - 14th, 2017

ISBN 978-602-60139-5-8





PROCEEDING

Surabaya International Health Conference 2017

Optimizing Health Care Quality Through Research, Clinical Treatment and Education



Penerbit UNUSA PRESS
Surabaya

Proceeding

Surabaya International Health Conference 2017

Proceeding : Surabaya International Health Conference 2017

522 hlm + xii, 21 x 29,7 cm

ISBN 978-602-60139-5-8



Penerbit UNUSA PRESS

Grup Penerbitan CV UNUSA PRESS,
Anggota APPTI No 002.011.1.07.2017

Kantor 1 : JL. Jemursari No. 51-57 Surabaya 60237

Kantor 2 : JL.SMEA No 57 Surabaya 60243

Email : unusapress@unusa.ac.id

Copyright © 2017 by Unusa Press

All Right Reserved

Isi diluar tanggung jawab percetakan

Hak cipta dilindungi undang-undang

*Dilarang keras menerjemahkan, memfotokopi, atau
memperbanyak sebagian atau seluruh isi buku ini tanpa izin tertulis dari Penerbit*

CONTENTS

Contents	i
Greeting from Steering Committee	viii
Opening remarks from Rector of Nahdlatul Ulama Surabaya University	ix
Conference Schedule	xi
 Plenary Sessions	
Interprofessional Collaboration In Education, Research And Practice Improving The Quality Of Health Care For A Better Future: The Implementation In Universitas Airlangga Teaching Hospital Nasronudin	1
Improving Health And Quality Of Life For People With Disability Tsan-Hon Liou	2
Beliefs And Practices During Pregnancy, Labor And Delivery, Postpartum And Infant Care Of Women In The Second District Of Ilocos Sur, Philippines Larguita P. Reotutar, Jousie B. Bermio	3
Contemporary Nursing Education: Challenges And Opportunities Lisa Mckenna	18
Indonesian Herbal Medicine From Traditional To Rational And Modern Phytopharmaca Handayani	19
Improving The Capacity Of Adult Aggregate Through The Diabetes Signs And Symptoms Management (Mandala Dm) In Srengseng Sawah Rusdianingsih	30
 Oral and Poster Presentation	
The Concept Of Nursing In The Philippines From The Perspective Of Nurses In Region I Francis Don L. Nero, Phd, RN	36
Clinical Experiences: Milestones In Nursing Education Julieta T. Guinid	47
The Local Health Care System Of The Province Of Ilocos Sur Marlou R. Savella, DPA	59
Detection And Characterization Of Anti-Ifn- Γ Autoantibody In Patients With Adult-Onset Immunodeficiency Syndrome Dyah Ika Krisnawati	72
Influence Of Disaster Preparedness Education On Sdn Pacet 1 Students' Preparedness Against Disaster At Mojokerto Endang Soelistyowati, Siswari Yuniarti, Adin Mu'afiro	73

The Decrease Of Depression Level In Elderly With Cooking Group Therapy As Modality Therapy In Panti Werdha Surabaya Dhian Satya Rachmawati, Ari Susanti, Marlina Meiningrum	417
Correlation Between Dietary Intake With Protein Energy Malnutrition Of Child 1-5 Years Old In Posyandu Kenanga 3 Bulak Banteng Surabaya Astrida Budiarti, Puji Hastuti, Vita Aristiarini	427
Stress In Patients With Diabetes Mellitus Christina Yuliasuti, Yuana.....	432
The Correlation Between Gestational Age And The Incidence Of Physiological Neonates Jaundice In Rsud Dr. Mohamad Soewandhi Surabaya Dwi Ernawati	439
The Effect Of Brain Gym On Cognitive Function Of The Elderly In Surabaya Dini Mei W	445
Feeding Response Neonates Based On Gestational Age, Hypoglycemia, Hyperbilirubnemia And Infection In Surabaya Qori' Ila Saidah.....	451
The Event Of Maternity Blues Been Reviewed From Paritas Ibu Nifas In BPM Nanik Cholid Sidoarjo Yasi Anggasari.....	458
Environmental Health Management Of Cement Industry Muslikha Nourma Rhomadhoni, Friska Ayu, Rizka Novembrianto	466
Correlation Of Days Of Fever And The Number Of Trombocytes On Secondary And Primary Dengue Hemorrhagic Fever Infection Rahayu Anggraini	472
Pain Adaptation Relationship In First Stage Of The Labor With Relaxation Technique In BPM Bashori Surabaya Nur Masruroh	479
Effects Of Coffee On Prevention Of Oxidative Stress And Inflammation Induced By Cigarette Smoke In Male Rats (Rattus Norvegicus) M. Khafid.....	486
The Effectiveness Of The Implementation Of Home Planning With The Structured Method On Family Preparation In Giving Early Mobilization On Patient Cerebro Vascular Attack In Rs. Islam Surabaya Siti Damawiyah, Nur Ainiyah.....	495
The Influence Psychoeducation On Menstrual Care Towards Menstrual Personal	

Hygiene On Female Teenagers With Mental Retardation Nurul Kamariyah, Sri Hartatik.....	487
Relationship Of Energy And Nutrients Adequacy On Nutritional Status Of Football Players Aged 9-12 Years Nur Amin, Yanesti Nuravianda Lestari	502
Correlation Of Equalization Technical To Barotrauma Events In Traditional Divers Village Kedung Cowek, District Bulak, Kenjeran, Surabaya Diyah Arini, Imroatul Farida, Rafika Rosita Sari	509
Body Mass Index Application Permadina Kanah Arieska.....	518

CONFERENCE SCHEDULE
SIHC NAHDLATUL ULAMA UNIVERSITY OF SURABAYA
Best Western Papillio Hotel Surabaya
13-14 July 2017

DAY 1, 13th July 2017

07.00 – 08.00	Registration
08.00 – 08.10	Welcoming Show (Pendet Dance by UNUSA's Student Activities Unit of Sendratasik)
08.10 – 08.15	Opening Ceremony (MC : Ika Mardiyanti, SST, M.Kes & Mira Nirmala Gita, Amd.Keb)
08.15 – 08.20	Indonesia Raya Anthem
08.20 – 08.30	Holy Qur'an Reading (M. Nasyik : Prodi D-IV Analisis Kesehatan)
08.30 – 09.00	Opening Speeches <ul style="list-style-type: none"> - Speech from Secretary of Research and communities services departement (Chilyatiz Zahroh, S.Kep.Ns, M.Kep) - Speech from Rector of Nahdlatul Ulama University of Surabaya (Prof.Dr.Ir.Achmad Jazidie, M.Eng)
09.00 – 09.10	MoA FK -TMU
09.10 – 09.15	Opening Pray (M. Khafid, S.Kep.Ns, MSI)
09.15 – 09.50	Keynote Speaker Prof. Dr. Ir. Mohammad Nuh, DEA
09.50 – 10.00	<ul style="list-style-type: none"> - Certificate & Souvenir Given to Keynote Speaker - Opening Poster Presentation Sessions
10.00 – 10.15	Coffee Break
10.15 – 10.25	Dance Performance (Kembang Pesisir dance)

Plenary Session I

10.20 – 10.55	Speaker 1 (Prof.Dr.Nasronudin, dr., Sp.PD., K-PTI., FINASIM)
10.55 – 11.30	Speaker 2 (Tsan-Hon Liou M.D., Ph.D)
11.30 – 12.00	Plenary Discussion (Moderator : Mujad Didien Afandi, S.S, M.Pd)
	Certificate & Souvenir Given to Speakers
12.00 – 12.20	Poster Presentation
12.20 – 13.30	Prayer, Lunch and Check in

Plenary Session II

13.30 – 14.05	Speaker 3 (Dr. Handayani, dr., M.Kes)
14.05 – 14.40	Speaker 4 (Rusdianingseh, S.Kep.Ns., M.Kep,Sp,Kom)
14.40 – 15.15	Speaker 5 (DR. Larguita Pasion Reotutar, MN)
15.15 – 15.45	Plenary Discussion (Moderator : Tiyas Saputri, S.S, M.Pd)
	Certificate & Souvenir Given to Speakers
15.45 – 15.55	Closing

DAY 2, 14th July 2017

07.00 – 08.00	Registration
08.00 – 08.35	Speaker 6 (Prof. Lisa McKenna)
08.35 – 08.50	Discussion (Moderator : Tiyas Saputri, S.S, M.Pd)
Oral Presentation I	
08.50 – 10.00	Room 1 (Moderator : dr. Herdian)
	Room 2 (Moderator : Endah Budi, S.TP, M.PH)
	Room 3 (Moderator : Difran Nobel, S.Kep.Ns, M.Kep)
	Room 4 (Moderator : Mira Nirmala Gita, Amd.Keb)
10.00 – 10.15	Coffe Break
Oral Presentation 2	
10.15 – 11.00	Room 1 (Moderator : dr. Herdian)
	Room 2 (Moderator : Endah Budi, S.TP, M.PH)
	Room 3 (Moderator : Difran Nobel, S.Kep.Ns, M.Kep)
	Room 4 (Moderator : Mira Nirmala Gita, Amd.Keb)
11.00 – 11.30	Closing Ceremony (MC) Announcement The Best Poster and oral participant Certificate Given for Participant
11.30 – 12.30	Prayer, Lunch & Check Out



Surabaya International Health Conference
July, 13th - 14th, 2017



CORRELATION OF EQUALIZATION TECHNICAL TO BAROTRAUMA EVENTS IN TRADITIONAL DIVERS VILLAGE KEDUNG COWEK, DISTRICT BULAK, KENJERAN, SURABAYA

Diyah Arini, Imroatul Farida, Rafika Rosita Sari College of Health Sciences Hang Tuah
Surabaya Email : diyaharini76@yahoo.co.id

Abstract

Barotrauma is the most common problem in traditional divers, due to pressure differences. Pressure can be equated doing of equalization technique. The purpose of this study was to analyze the relationship of the technique of equalization to the incidence of barotrauma on traditional divers. The research design was analytic with Cross Sectional approach. Sample size 35 respondents, sample technique use probability sampling (simple random sampling). Data were collected use questionnaires and observation sheets. Data were analyzed using Spearman Rho test.

The result of this study use the technique of equalization performed by traditional divers using toynbee equalization technique, and the incidence of barotrauma on the traditional diver in the diver not equalize according to the procedure. In prove with the results of spearman rho test shows the value $p = 0.029$ ($p < \alpha = 0.05$). The implications of this research require the support of the traditional divers as the coordinator for traditional divers to change the traditional divers behavior in performing diving procedures.

Keywords: Equalization Technique, Barotrauma Occurrence, Traditional Diver

INTRODUCTION

Diving is a beneath water activity using a tool or without tools (Soepadmo, 1990 Abshor, 2008). Diving have a standard procedure that needs to be done, the procedure should be performed when the dive one is the equalization technique. Equalization is an engineering technique to equalize the outside and inside pressure of the body cavities. There are body cavities, ear, nose, lungs (LAKESLA, 2013). The Divers who do not comply with the procedure's can get health problems, especially on barotrauma's disease (PKHI, 2006). Barotrauma is the detriment one of body that occurs due to the difference in air pressure inside the hollow space with a pressure environment (Dwi Sumiarso Suhandi, Mes, 2015). Based on preliminary survey in kedung cowek and doing a live interview on traditional divers, mostly the divers did not do equalization techniques when diving and many divers are experiencing sharp

symptoms as like on barotrauma mark head, ear, full some illness on the ears, pain on chest. The data collected was recorded Sepim Kesma Health in 2008, from traditional divers find from 1026 divers, 93.9% of divers have experienced health problems as many dives problems, 39.5% experiencing Barotrauma, 29.8% experienced a Decompression, and 10.3% experiencing paralysis (Directorate General of disease control and environmental health of the 2008 Joon, 2009). Based on a preliminary study of about in kedung cowek of 5 traditional divers, 100% did not do equalization technique so the result is 3 or 60% of divers have experienced of pain symptoms with the mark 1 ear, vertigo and 2 or 40% of divers have experience of barotrauma, 0 signs symptoms of ear, dizziness. Barotrauma can be reduced if the traditional diver want to do techniques of equalization time on diving. The Government in this regard the Ministry of

marine and fisheries has made the law No. 7 year 2016 regarding about protection, empowerment of fishermen, fish farms and enterprises saltness. On section 30 says that the Central Government and local governments provide protection to the risk faced by fishermen when fishing On section 40 says that the Central Government and the obligation to organize health education and training to fishermen and families in accordance with the provisions of the Act (Act of the Republic of Indonesia No. 7, 2016). Marine and Fisheries Agency of the city of surabaya accompany with healthy department and Chairman of the fishermen of the coastal area to do health education on traditional divers. Health education especially the safety on while diving seeking fish, one of them concerning the technique of equalization in traditional scuba divers to avoid barotrauma and reduce the incidence of barotrauma in kedung cowek.

METODE

The design of this research is to analyze the relationship of events equalization technique of barotrauma on the traditional divers in cowek kedung surabaya by using observational analytic design and Cross Sectional approach. Sampling of this research uses a probability technique sample random sampling. This research was in the village Cowek, Kedung Bulak, Kenjeran. Data has taken on 06 April 2017, the population of this research is the traditional divers in kedung cowek, kenjeran surabaya with quantity population of 39 samples were obtained, and respondent amounted to 35 respondents.

The definition of operational from the research has at below:

The Research on the technique of equalization instrument using a detailed questionnaire.

Research on the instrument of barotrauma using observations containing about berotrauma examination of ear, sinus barotrauma, and pulmonary barotrauma

are observed directly by a physician. Implementation of the research begins from, first assemble the divers come in research place, second give explanation about the objectives, benefits and implementation research, as well asking to the divers to fill the inform consent after receiving the explanation. Traditional divers are requested fill the questionnaire has given by the researcher then the divers would examined using traditional otoskop to observe genesis of barotrauma on the traditional divers by examining the tympanic membrane, respondent. For All data collected are presented in the form of a table. The Data analysis using the method of test spearman rho.

RESULTS

This study was conducted on April 6, 2017, in the Village Kedung Cowek, Kenjeran, Surabaya. Respondents in this study is a traditional diver who totaled 35 people. Characteristics of respondents in this study include age, gender, education, religion, long dive, dive depth, dive frequency

1. General data

Table 1. Distribution Characteristics of Respondents by Gender

Gender	Frequency (f)	Percentage (%)
Man	35	100
woman	0	0
Total	35	100

Based on the traditional diver table 1 is obtained based on sex altogether 35 people (100%) male sex and there are no female gender as a traditional diver.

Table 2. Characteristics of Respondents by Age

Age	Frequency (f)	Percentage (%)
35-45	20	57.1
46-59	13	37.1
60-69	2	5.7
Total	35	100.0

According to the table 2 in a traditional divers get by age mostly aged 35-45 years

with a number of 20 persons (57.1%), almost half of 46-59-year-old with the number of 13 people (37.1%), and a small proportion aged 60 -69 years with the number 2 (5.7%).

Table 3. Characteristics of Respondents by Education

Education	Frequency (f)	Percentage (%)
SD	1	2.9
SMP	28	80.0
High School	6	17.1
Total	35	100.0

Based on Table 3 obtained by traditional divers divers terkhir traditional education is almost entirely a junior secondary education amounted to 28 (80%), high school educated fraction amounts to 6 people (17.1%) and a small elementary school education numbered 1 (2.9%) ,

table 4 Characteristics of Respondents Based on Religion

Religion	Frequency (f)	Percentage (%)
Islam	35	100
Total	35	100

Based on Table 5.3, obtained by traditional divers Moslem religion altogether totaling 35 people (100%)

table 5 Characteristics of Respondents Based on the Old Diving

Years of service	Frequency (f)	Percentage (%)
3-5 years	1	2.9
6-10 years	6	17.1
> 10 years	28	80.0
Total	35	100.0

Based on Table 5 obtained by the old traditional diver diving > 10 years of almost totaled 28 people (80%), 6-10 years old dive fraction amounts to 6 people (17.1%), 3-5 years old dive fraction totaled 1 people (2.9%).

table 6 Characteristics of Respondents Based on Depth Diving

Diving depth	Frequency	Percentage
--------------	-----------	------------

	(f)	(%)
<10 meters	25	71.4
10-30 meters	10	28.6
> 30 meters	0	0
Total	100	100

Based on table 6 obtained by traditional divers diving depth <10 meters largely amounted to 25 (71.4%), almost half of the traditional diver diving to a depth of 10-30 meters a number of 10 people (28.6%) and none diver dives with a depth > 30 meters.

table 7 Characteristics of Respondents Based on Frequency Diving

frequency Diving	Frequency (f)	Percentage (%)
Rarely	1	2.9
Sometimes	4	11.4
Often	4	11.4
Very often	26	74.3
Total	35	100

Table 7 shows that the most traditional divers with diving fekuensi 24-30 times a week some 26 people (74.3%), the fraction with a traditional diver diving frequency of 23-26 times a week 4 (11.4%), traditional diver small part of the frequency dive 8-15 times a week 4 (11.4%), and a small part of the frequency of 1-7 times a week a number of 1 (2.9%).

2. Custom table

table 1 Diving equalization technique

doing equalization	Frequency (f)	Percentage (%)
No	18	51.4
Toynbee maneuver	17	48.6
Frenzel maneuver	0	0
Lowry Technique	0	0
Edmonds Technique	0	0
Valsavah maneuver	0	0
Total	35	100.0

Table 1 shows the most traditional diver who does not perform equalization were 18 people (51.4%), nearly half did equalization while diving using equalization techniques Toynbee maneuver amounted to 17 (48.9%), none of the divers who use the technique maneuver franzel , Lowry technique,

edmonds technique, and valsavah maneuver.

table 2 the incidence of barotrauma

barotrauma		
	Frequency (f)	Percentage (%)
Yes		
Ear barotrauma	24	68.5
Nose barotrauma	1	2.9
pulmonary barotrauma	0	0
Dental barotrauma	0	0
No	10	28.6
Total	35	100

Based on Table 2 shows mostly traditional divers experience barotrauma total 25 persons (71.4%), with ear barotrauma number of 24 people (68.5%), barotrauma nose number 1 (2.9%), traditional divers almost half are not experience barotrauma of 10 people (28.6%).

table 3 Correlation Between equalization technique Genesis Against Ear barotrauma On Traditional Diver

equalizati on technique s	Barotrauma				Total	
	Yes		No			
	f	%	f	%	F	%
Yes (Toynbee)	8	32	9	90	17	100
No	17	68	1	10	18	100
Total	25	100	10	100	35	100

Spearman rho = 0.029 α = 0.05

Based on Table 3 shows the majority of traditional diver who does not perform equalization technique and experience barotrauma amounted to 17 (68%), a fraction of traditional diver who did not experience barotrauma equalization and number 1 (10%). Traditional divers who do not experience barotrauma equalization and almost seluruhnya totaled 9 (90%) and traditional divers who perform equalization Toynbee but suffered barotrauma almost halved number of 8 (32%). Based on statistical Spearman rho test that measures the level or the close

correlation between the two variables bersekala ordinal. Spearman rho test results obtained p value $< \alpha$ or $0,029 < 0,05$ so that H_0 refused and H_1 accepted, then there is a correlation between the incidence of barotrauma equalization techniques in traditional divers dikelurahan Kedung Cowek Surabaya.

DISCUSSION

1. Equalization Technique On Traditional Divers Village Kedung Cowek In Surabaya

Tabel 1 the results showed the use of equalization techniques in traditional divers dikelurahan kedung Cowek Surabaya most of which did equalization were 18 people (51.4%), Surabaya and medicine Faculty of Medicine, University of Hang Tuah Surabaya. This is because the majority of low-educated traditional divers proved by the data of divers who do not perform equalization technique with a secondary school education 16 (88.9%). According Rahayu (2015) education is a determining factor for every person in the act. The higher one's education, the better is also the person to keep his life in this case health. According to investigators traditional divers with low education affect a person's behavior in a positive action. Behavior like this makes traditional diver equalization technique does not assume a negative impact on health.

Old diving also influence individuals to perform the appropriate procedures such as equalization techniques that should be done when diving. The majority of traditional diver who does not perform equalization technique is an old diver diving has more than 10 years. This is evidenced by the data obtained by researchers of 18 people (68%) of traditional diver who does not perform equalization technique, almost entirely traditional diver who does not perform equalization with the long dive > 10 years amounted to 14 (77.8%). This is because the traditional with old diver diving > 10 years more experience and consider the

procedure dives is not too important. This is evidenced by the theory of adaptation of Lawrence Green is a change in behavior, according to Lawrence Green behavior is influenced three factors, predisposing factors which include knowledge and attitudes, traditions and beliefs, levels of education and the economy to health, the factors enabling covers the availability of facilities and infrastructure or medical facilities needed in the implementation of health behaviors, reinforcing factors include attitudes and behavior of families, health workers, community and religious (Nursalam, 2013). According to investigators with the old traditional diver diving > 10 years are familiar with the circumstances and already does not care about the procedures to be followed when diving. Traditional diver already accustomed to not doing equalization while diving and was not bothered by his health while new divers should be able to adapt to the environment by way of equalization techniques to equalize the pressure from the outside and adjust the pressure of the body so it does not happen a disease dives. Diving frequency can also affect a person does not perform equalization techniques proven by the data of traditional divers who dive 24-30 times / week the majority of some 15 people (83.3%) did not perform equalization techniques. Traditional divers dive with a frequency very often already familiar with do not perform equalization technique, because at the time of the dive do not feel a disturbance in the body when you do not perform equalization techniques.

Traditional diver nearly half did equalization techniques Toynbee maneuver a number of 17 (42.9%). According notoatmojo (2012) health behavior is a person's response to the stimulus or object-related illness and disease as well as the environment. Behavioral health for disease prevention, cure when sick, Working and health recovery. Changes in behavior can be seen from the thoughts and feelings of every

individual to a stimulus, the other person is the reference to commit an act of a person's mindset and attitude towards a particular stimulus. According to investigators, Toynbee equalization technique is mostly done by traditional divers for divers according to this technique is easily performed in water. Mechanical Toynbee maneuver can be performed by pinching the nose, swallowing hard.

2. The incidence of barotrauma On Traditional Divers Village Kedung Cowek In Surabaya

Tabel 2 research results obtained mostly traditional divers experience barotrauma total 25 persons (71.4%) most experienced ear barotrauma number of 24 people (68.5%). This is because when diving ears get bigger pressure than the other body cavity. Divers will more often experience recurrent ear pressure on the eardrum. Traditional diver who suffered barotrauma nose number 1 (2.9%), this is due to the relatively negative pressure due to contraction of the air in the nose that can occur bleeding at the nose. This is because most traditional divers ages 35-45 years old with the number of 14 people (56%) experienced barotrauma. Age is one of the individual characteristics that will influence the frequency of occurrence of disease because of the influence of the body's resistance to exposure, so the age can affect the durability of a traditional diver on the incidence of some diseases such as barotrauma. Increasing the person's age will decrease the body's resistance to disease. According to research Ekawati (2010), age > 40 years more experience barotrauma barotrauma especially ear and tympanic membrane perforation compared with age <40 years. Ekawati research consistent with research from sowendro (2006) who said the cause of a person experiencing barotrauma due to the tympanic membrane thickening and stiffness that can lead to progressive hearing loss that is usually influenced by

the age of over 45 years. According to investigators the age factor can affect a person affected by barotrauma. Childbearing age can experience barotrauma more than older adults age because they aged <40 years has not yet adapted to the environment and other factors such as long dive also affect divers experience barotrauma. The majority of the traditional with old diver diving > 10 meters almost most experienced barotrauma proved by the data of 35 people, the traditional with old diver diving > 10 years were mostly experienced barotrauma of 20 people (71.4%). Traditional experienced divers due to long diving barotrauma due to diving too long done for many years and each day will give negative impact to our health, especially the ability of auditory function. According to the study of revelation (2012) proved that length of term of office associated with risk of middle ear barotrauma. The longer the term of office, then the risk of barotrauma is increasing, due to repeated exposure to changes in the pressure of increasingly frequent and Eustachian tube will often have exposure to changes in atmospheric pressure which can affect its function. The length of a person's work as a diver to be one cause of barotrauma in this case at the hearing, because the longer a person is exposed to a pressure difference, the risk for the occurrence of barotrauma greater. According to investigators the longer a person diving, the greater a person's risk of barotrauma occurs. The incidence of barotrauma is associated with a person's ability to adapt to exposure causes changes in pressure. Traditional divers were unable to equalize the pressure in the water will potentially experience barotrauma, repeated exposure to the pressures of increasingly frequent causes the body will often have exposure to changes in pressure that may affect its function, especially in eustachian tube function. Not only long dive, dive depth is also one factor affected by barotrauma divers. This is evidenced by

the data of traditional divers with diving dikedalaman <10 meters mostly experienced barotrauma evidenced by the data of 18 people (72%). According Darjo in Indriati (2010) deeper dive respondents, will get greater pressure, it means the greater the effect on the health of divers. The human body gets the water pressure at depth will adjust to this pressure. When the body can not adjust to these pressures, it can happen squeeze / trauma. Squeeze / trauma generally can occur in 10-meter dives and decompression dives can occur at 12.5 meters. According to investigators traditional divers who dived <10 meters is not at risk of barotrauma, because traditional divers dive is not too deep. Frequency can also affect one's diving experience barotrauma evidenced by the data of traditional diver who dives frequency of 24-30 times / week largely mengalamii barotrauma 18 men (72%). According to Fatmawati (2015) a diver who often divers will more often traumatized repeated pressure on the eardrum. This will result in the balance organ in the inner ear tissue swelling and blockage of the Eustachian tube to perforate the tympanic membrane can even cause bleeding and torn eardrum. According to researchers respondents with frequency dive very often have a long working period and not carry out the procedure dive right that many traditional diver who suffered barotrauma especially ear barotrauma. Another thing that can affect is the physical condition at the time of the dive. From the interview at the time of the study obtained information that sometimes divers are forced to do the dives even though they feel unwell usually fixed divers to dive at the time of the flu.

3. Correlation Between equalization technique Against Genesis barotrauma On Traditional Divers Village Kedung Cowek In Surabaya

The results of the study Table 3 is obtained between engineering equalization on the incidence of barotrauma is of 18

people (78%) divers traditional, which does not perform equalization and experience barotrauma number of 17 people (68%), while divers who do not perform equalization and did not experience barotrauma number 1 (10%). Traditional diver who does not perform equalization, because there are still many traditional diver who do not know a good dive procedures, there is also a traditional diver who already know the procedures to be followed when diving but do not comply with the recommended procedure dives. According to the law Boyle (1662) in Yupiteri (2012) which states that the volume of gas is inversely proportional to pressure. A decrease or increase in environmental pressures will increase or depress a volume of air in a confined space. At the time down from an altitude, atmospheric pressure will rise and the gas pressure in the middle ear will fall. The air will not enter the middle ear spontaneously, auditory tube must be opened with a yawn movement or other maneuver that often goes unnoticed, which occur every minute, or more frequently. According to investigators traditional diver who dives will put air cavity filled with a gas such as the ears and lungs can occur barotrauma. Barotrauma most often affected by novice divers because of not knowing how to perform equalization during the dive and dive lack of control theory and new environmental factors also affect novice divers experience barotrauma. Barotrauma the process begins when divers started diving makes the outer ear canal causing water to get into the open air replaces. The ear canal may be hampered by earwax or earmuffs will cause disturbed balance ear pressure and bleeding in the ear. Complaints are usually emerge that sense of fullness in the ear, ear pain to occur vertigo if the diver is exposed ear barotrauma. The situation can be resolved by Toynbee equalization technique which is easily done by divers tradisional on during a dive.

Diver traditional techniques equalization and did not experience barotrauma number 9 (90%), this is because at the time diving outside pressure will press so that the body's response will equalize the pressure by means of equalization, so that the pressure between the outside and inside of the body will equal and there is no barotrauma. According Ekawati (2010) traditional divers who perform procedures in accordance with the given has a small risk of barotrauma or illnesses likely to occur more dives. The dives procedure should be done by performing equalization techniques such as Toynbee or Valsalva because this technique is often used when performing equalization divers. Divers on the way up to the surface should be slowly and not rush on the way up because it can cause barotrauma. According to researchers obedience person in performing a procedure dives will also affect the health. Traditional divers who perform the appropriate procedures, will minimize the occurrence of diseases such as barotrauma diving. Prevention of traditional diver dives to avoid diseases such as barotrauma, the diver must be able to perform equalization techniques before the dive. Many traditional diver who can perform equalization techniques Toynbee surface before diving by pinching the nose and then swallowed performed simultaneously. Equalization procedure is very important for all divers, especially traditional and divers should be trained regularly in order to carry out the procedure properly.

CONCLUSION

The use of equalization techniques have a significant correlation to the incidence of barotrauma on traditional divers in the Village Kedung Cowek Surabaya

REFERENCES

1. Ariadno B, irianto B, Suhodo K, Rudy H. (2003). Handbook 1 Star Scub Diver CMAS-Indonesia, Jakarta, Indonesia SCUBA Instructor Board
2. Bashirudin J, et al. (2011). Occupational ENT diseases, Jakarta, the Ministry of Health of the Republic of Indonesia
3. Dahlan, S. (2014). Statistics Medical and Health, Jakarta, Indonesia Epidemiology
4. Dwi S, Suhandi M,. (2015). Specialty Diving Packages Diving Instruction Basic Health International, Surabaya, Development and Education Command of the Navy
5. Dwi S, Suhandi M,. (2015). Scuba Instruction Package Special Open Systems Scuba Diver (Scuba Diver), Surabaya, Development and Education Command TNI
6. Irma Indah, Ayu S. (2013). Dental Diseases, Mouth and ENT, Yogyakarta, Nuha Medika
7. Jhon F, Petar D. (2014). Smart Guide to Ear Equalization Beat The Squeeze: equalize Like a Pro.<http://media.dan.org/DAN-SmartGuide-Ears.pdf>, Downloaded January 3 2017 at 17:30 pm
8. LAKESLA. (2013). Textbook of Diving and Hyperbaric Medical science, Surabaya Health Institute of Marine Navy
9. Kris W,. (2012). Overview of hearing loss in the Navy divers, Nursing Graduate Program, University of Indonesia: Thesis not published
10. Maulana Otto, Rosadi D, Adi R, et al. (2000). Diving Health Sciences, Jakarta, Gramedia
11. Notoatmodjo, S. (2012). Health Promotion and Behavioral Health, Jakarta, Rineka Reserved
12. Nursalam. (2013). Methodology of Nursing Research: A Practical Approach 3rd Edition, Jakarta.Salemba Medika
13. Pitoyo Y, Bashiruddin J, Alfian F, Day Haksono, Septawati B. (2009). *Relationship Value Press Middle Ear barotrauma By Degrees In Candidate Airmen.* <http://www.perhati-kl.or.id/v1/wp-content/uploads/2011/11/Hubungan-nilai-tekanan-telinga-tengah-dr1.pdf>, downloadable dated December 17, 2016 at 19:00 pm
14. Prasetyo AT, Soemantri J, Lukmantya. (2012). Effect of Depth and Length Scuba Diver With Hearing Threshold Traditional By barotrauma. *Otorhinolaryngologival Indonesia*; 42 (2)
15. Rahayu D, Jimmy F, Vennetia R. (2015). *Analysis of Hearing Loss In divers in the lake of Tondano Rural District of Eris Watumea Minahasa regency of North Sulawesi province.**Journal e-Blomedik (EBM)*; 3 (1)
16. Stanskaw B, Andrzej B,. (2009). Antonio Maria -tworca Podstaw Anatomii Ologicznej. Otolaryngological Department of ceynowa hospital in Wejherowo; 8 (13-17)
17. Ulil A. (2008). Effect of barotrauma Auris Hearing Impaired At Divers Fishermen Puger Subdistrict Jember.<http://orli.or.id/index.php/orli/article/download>, Downloaded dated December 16, 2016
18. *Law of the Republic of Indonesia. (2016). Protection and empowerment of fishermen and aquaculture fish farming salt,*[http://uu.nomor7tahun2016Nelayan.pdf](http://uu.nomor7tahun2016nelayan.pdf), downloadable dated January 21, 2017 18:00 pm
19. Yoram Segev, Roe Landsberg, M. Fliss (2003), MR Imaging Appearance of Frontal Sinus barotrauma, <http://www.ajnr.org/content/24/3/346> downloaded dated May 13, 1017 12:00 pm
20. Yuni Ika W,. (2012). Manual physical examination procedures on the ear, http://ners.unaie.ac.id/materikuliaah/M_P_PemeriksaanFisikTelinga_New.pdf

downloaded on 25 January 2016 at
20.00 pm



Nahdlatul Ulama University
of Surabaya



Certificate

This is to certify that :

DIYAH ARINI

has attended

as **ORAL PRESENTER**

**Optimizing Health Care Quality Through Research
Clinical Treatment and Education**

(Nursing and Midwifery, Medicine and Science of Health)

Best Western Papilio Hotel, Surabaya, Indonesia
13th - 14th July 2017

SKP IDI No. 384/PKB/IDI-WJ/2017, Peserta 8 SKP, Pembicara 5 SKP, Moderator, 2 SKP, Panitia 1 SKP
SKP IAKMI No. 114/IAKMIPUSAT/SKP-V/2017, Peserta 5 SKP, Oral Presenter 3 SKP, Poster Presenter 2 SKP, Pembicara 6 SKP, Moderator 3, Panitia 4 SKP
SKP PPNI No.0545/DPP.PPNI/SK/K.S/2017, Pembicara 3 SKP
SKP PPNI No. 0533/DPP.PPNI/SK/K.S/VI/2017, Peserta 2 SKP, Pembicara 4 SKP, Panitia/Moderator 3 SKP
SKP PERSAGI No. 1531/DPD-JATIM/A/VI/2017, Peserta 3 SKP, Pembicara 2 SKP, Panitia/Moderator 2 SKP
SKP IBI No. 4510/S/SKP-IBI/VII/2017, Peserta 4 SKP, Pembicara 5 SKP, Moderator 4 SKP, Panitia 4 SKP

Rector

Prof. Dr. Ir. Achmad Jazidie, M.Eng

Chairperson
Organizing Committee

Umdatus Soleha, S.ST., M.Kes.

SURABAYA INTERNATIONAL HEALTH CONVERENCE

NO	PEMATERI	TEMA	WAKTU
1.	Prof. Dr, Nasrodin, dr., Sp.PD.,K-PTI.,FINASIM	From Laboratory to Health Care : Implementing Research Outcome in Tropical Diseases Klinikal Management	35 MENIT
2.	DR. Larguita Pasion Reotutar, MN	Improving the Quality of Health Professionals in Maternity	35 MENIT
3.	Prof. Lisa McKenna	Improving Health Worker Empathy in Palliative Care Patient	35 MENIT
4.	Prof. Tsan hon Liou M.D., Ph.D	Anti Cancer Therapy Planning Milestones for Developing Novel Theraphy in Cancer	35 MENIT
5.	Dr.Handayani, dr., M.Kes	Potensial Herb Use in Indonesian Heritage Practice	35 MENIT
6.	Rusdianingseh, S.Kep.Ns., M.Kep,Sp,Kom	Diabetic support group in Community	35 MENIT