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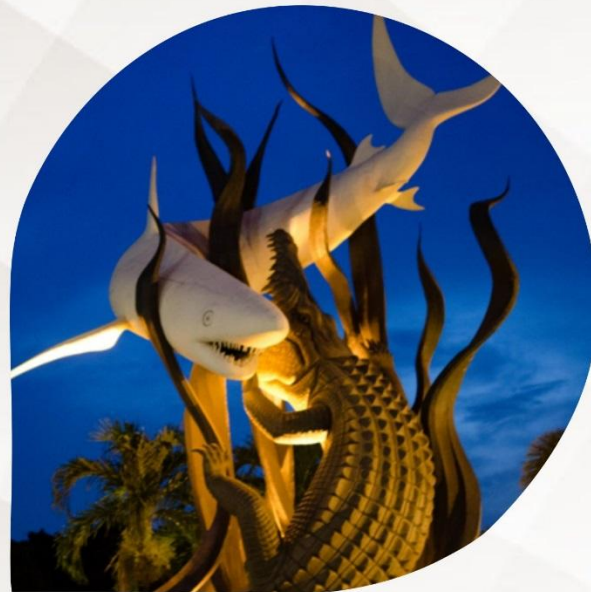


STIKES  
Hang Tuah



Poltekkes  
Surakarta

**THE PROCEEDING OF  
THE 9<sup>th</sup> INTERNATIONAL NURSING CONFERENCE**



***The 9<sup>th</sup> INC 2018***

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**“Nurses at The Forefront  
Transforming care, Science, and Research”  
Surabaya, April 7<sup>th</sup> - 8<sup>th</sup> 2018**

*Faculty of Nursing Universitas Airlangga Surabaya Indonesia*

**THE PROCEEDING OF  
THE 9TH INTERNATIONAL NURSING CONFERENCE 2018  
“NURSES AT THE FOREFRONT IN TRANSFORMING CARE, SCIENCE, AND  
RESEARCH”**



**FACULTY OF NURSING  
UNIVERSITAS AIRLANGGA  
2018**

The Proceeding of 9<sup>th</sup> International Nursing Conference:  
Nurses at The Forefront in Transforming Care, Science, and research

Fakultas Keperawatan Universitas Airlangga

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## **GREETING FROM STEERING COMMITTEE**

*Assalamualaikum Warahmatullahi Wabarakatuh*

Honorable Rector of Universitas Airlangga  
Honorable Dean of Faculty of Nursing, Universitas Airlangga  
Honorable Head of Co-Host Institutions  
Distinguished Speakers and all Participants

Praise the presence of God Almighty, for his mercy so that Faculty of Nursing Airlangga University can organized The 9th International Nursing Conference 2018 “Nurses at The Forefront in Transforming Care, Science, and research”. Welcome in Surabaya, City of Heroes Indonesia.

This international nursing conference is conducted by The Faculty of Nursing Universitas Airlangga with cooperation of two nursing schools throughout the nation. These institutions including, Poltekkes Kementerian Kesehatan Surakarta, and STIKES Hang Tuah Surabaya. Once more aims to elaborate with the aforementioned institutions and international universities through holding an international nursing conference. The international universities include: La trobe University (Australia), University of Colleague Cork (Irelandia), University of Malaya (Malaysia), and Naresuan University (Thailand).

Proceeding of this International Nursing Conference will be submitted to SCOPUS. The selected papers will be submit at Journal Ners and online ISSN proceeding.

Participants of this conference are lecturers, nurses, students both from clinical and educational setting, regional and overseas area.

Finally, I would like to thanks to all speakers, participants, and sponsors so that this conference can be held successfully.

Please enjoy the international conference, I hope we all have a wonderful time at the conference.

*Wassalamualaikum Warahmatullahi Wabarakatuh*

Steering Committee

## **OPENING REMARK FROM THE DEAN OF FACULTY OF NURSING**

*Assalamualaikum Warahmatullahi Wabarakatuh*

Honorable Rector of Universitas Airlangga  
Distinguished speakers and all Participants

First of all, I would like to praise and thank God for the blessing and giving us the grace to be here in a good health and can hold this conference together. Secondly, it is a great privilege and honor for us to welcome every one and thank you very much for your participation and support for The 9th International Nursing Conference 2018 “Nurses at The Forefront in Transforming Care, Science, and research”.

Research and education into practice is very important to enhance nursing competencies with nurse colleagues in the international sphere. Indonesia face problems such low frequency of nursing conference, number of researches, also international publications. This problem can hinder quality improvement of nursing services.

The demand of health care services including nursing care will increase continuously not only the quality but also the affordability and the service coverage. Facing this society's demands, particularly in the field of nursing, we should make a change in various aspects such as in nursing education, nursing practice and nursing research. The science of nursing has philosophy and nursing paradigm that underlying the various aspects to improve professional in education, practice, and nursing research. As a science, nursing can grow continuously through research and education.

The interaction among education, practice, and nursing research are interrelated and affect the development of science in nursing. Nursing practice has interactions with nursing education and research. Practice can be used as a source of nursing phenomena that occurs, so it can become a nursing model in accordance with the theory developed in education and has been proven through nursing research. In addition, nursing research become a substance of the development of nursing science, because of through nursing research may prove the theory which developed in education so it is useful and can be practiced in the health service. So, it can be concluded that education, nursing practice and research have interaction each other that cannot be separated.

Along with Universitas Airlangga vision to become a world class university and enter top World University Ranking, Faculty of Nursing, participates actively in reaching the vision. To achieve World Class University ranking, faculty needs to meet the standards of World's top Universities such as Academic reputation, employer reputation, publication, faculty standard ratio, international students and exchange. International Nursing Conference is one of the few strategies that have been implemented by the faculty to increase Publication standard.

Finally, I would like to thank to all speakers, participants, and sponsorships that helped the success of this event. I hope that this conference having good contribution in increasing the quality of nursing and nursing care.

Please enjoy the international conference. I hope, we all have a wonderful time at the conference.

*Wassalamualaikum Warahmatullahi Wabarakatuh*

Prof. Dr. Nursalam, M.Nurs (Hons)  
Dean, Faculty of Nursing  
Universitas Airlangga

## **OPENING SPEECH FROM THE RECTOR OF UNIVERSITAS AIRLANGGA**

*Assalamu 'alaikum wa-rahmatullahi wa-barakatuh.  
May the peace, mercy and blessings of Allah be upon you.*

Alhamdulillah! Praise be to Allah, The Almighty for giving us the opportunity to gather here in The 9th International Nursing Conference 2018 “Nurses at The Forefront in Transforming Care, Science, and research”. Let us also send *shalawat* and *salam* to our Prophet Muhammad SAW (Praise Be Upon Him): *Allaahumma shalli 'alaa Muhammad wa 'alaa aali Muhammad*. May Allah give mercy and blessings upon Him.

Ladies and gentlemen,

Nursing is a dynamic science and profession. It can be seen from the relentless efforts made to optimize either the scientific or practical aspects of Nursing. These efforts towards excellence are absolutely needed.

Innovations in providing nursing care are possible to be introduced through education, practice and research. In this regard, we believe that those innovations are from “new concepts” formulated in the field of Nursing to provide the best service. If we can do this, there will be more benefits we can get such as gaining reputation for nursing profession and the education institution.

Ladies and gentlemen,

Higher education of Nursing has a strategic role towards excellent healthcare service. Therefore, the education format should be ready anticipating any developments. This readiness is needed to accelerate the realization of “Healthy Global Citizen”.

So, let us exploit these changes around us, and consider this improving healthcare service as our success towards welfare. Let us always be consistent to improve quality in the field of Nursing. This field of science is expected to respond and voice concern about all aspects of healthcare service development in any communities.

At this point, the organization of The 9th International Nursing Conference 2018 “Nurses at The Forefront in Transforming Care, Science, and Research” as the theme is important. We cannot deny that through the upgrade and transformation of Care Science by Research we will get valuable findings for Nursing science development.

In education, students’ questions can start new discourses towards Nursing science development. In its practice, various problems and solutions found in the field will broaden the scientific scope of Nursing. In research, through this activity we are developing the science in a well-planned and scientific manner.

Therefore, let us use this wonderful occasion to present research findings, either from the education, practice and research. We believe that this event will take on the challenges in providing quality healthcare service in the society.

Ladies and gentlemen,

Finally, I would like to express my gratitude to the committee, all nursing education institutions, either domestic or overseas, for participating in this event, and other people contributing to make this event a success. May everything run well and every objective achieved. Have a great conference and workshop. Good luck!

*Wassalamu 'alaikum wa-rahmatullahi wa-barakatuh.*

Rector of Universitas Airlangga,  
Prof. Dr. Moh. Nasih, SE., MT., Ak., CMA.  
NIP. 196508061992031002

**COMMITTEE OF INTERNATIONAL NURSING CONFERENCE  
FACULTY OF NURSING UNAIR TAHUN 2018**

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**TIME SCHEDULE**  
**9<sup>TH</sup> INTERNATIONAL NURSING CONFERENCE**  
**“Nurses at the Forefront Transforming Care, Science, and research”**  
**Surabaya, 7 – 8 April 2018**

**DAY 1, SATURDAY 7<sup>th</sup> April 2018**

TIME	ACTIVITY	VENUE
07.00 – 08.30	Open Registration	Ballroom Isyaana Hotel Bumi
08.30 – 08.45	<b>Opening Remarks</b> <ul style="list-style-type: none"> <li>• Indonesia Raya: National Anthem</li> <li>• Hymne Airlangga</li> </ul>	
08.45 – 09.15	- Welcoming Show (Traditional Dance): Sparkling Surabaya - Speech from Dean of The Faculty of Nursing, Universitas Airlangga - Speech from Rector Universitas Airlangga - Opening ceremony: Hit the Gong - Pray	
09.15 – 09.45	<b>Keynote Speaker</b> Vice Rector I Universitas Airlangga (Development of Nursing Faculty to Word Class University)	
09.45 – 09.50	- Certificate Conferment & Giving Souvenir	
09.50 – 10.00	<b>Coffee Break and Opening Poster Presentation</b>	
10.00 - 10.20	<b>Speaker 1</b> Dr. Muhammad Hadi, SKM., M.Kep (Universitas Muhammadiyah Jakarta, Indonesia) <i>“The Role of AINEC to Improve Quality of Nursing Through Education, Clinical Practice and Research”</i>	Ballroom Isyaana Hotel Bumi
10.20–10.40	<b>Speaker 2</b> Professor Lisa McKenna (La Trobe University, Australia) <i>“Challenges in research publication in nursing”</i>	
10.40 – 10.55	<b>Speaker 3</b> Elsi Dwi Hapsari, B.N., M.S., D.S (Universitas Gajah Mada, Indonesia) <i>“Improving Image of Nurses in Indonesia: Role of INNA”</i>	
10.55 – 11.15	<b>Speaker 4</b> Dr. Aileen Burton (University College Cork, Ireland) <i>“Diabetes and psychological wellbeing: a neglected aspect of care”</i>	
11.15 – 11.45	Plenary Discussion	
	Conferment of certificates	
11.45 – 12.45	Poster Presentation 1	
	<b>Pray Time &amp; Lunch Break</b>	
12.45 – 13.05	<b>Speaker 5</b> Professor Eileen Savage (University College Cork, Ireland) <i>“Online versus paper based screening for anxiety and depression in adults with cysticfibrosis in Ireland”</i>	Ballroom Isyaana Hotel Bumi
13.05 – 13.25	<b>Speaker 6</b> Dr. Bill McGuinness (La Trobe University, Australia) <i>“Evidenced based update on wound management”</i>	
13.25 – 13.40	<b>Speaker 7</b>	

TIME	ACTIVITY	VENUE
	Yuni Sufyanti A, S.Kp., M.Kes (Universitas Airlangga, Indonesia) <i>“Family Centered Empowerment Model as a Effort to Increase Family’s Ability to Caring Children with Leukemia”</i>	
13.40 – 13.55	<b>Speaker 8</b> Addi Mardi Harnanto, M.Nurs (Poltekkes Kemenkes Surakarta, Indonesia) <i>“The Effort to Improve the Competency and Softskill of Disaster Preparedness Management for Graduates of Nursing colleges in Indonesia”</i>	
13.55 – 14.25	Plenary Discussion Conferment of certificates	
14.25 – 14.45	<b>Speaker 9</b> Assist. Prof. Dr. Supaporn naewbood (Naresuan University, Thailand) <i>“The Role of Nurses in Palliative Care Program and Development”</i>	
14.45 – 15.05	<b>Speaker 11</b> Dr. Vimala A/P Ramoo (University Malaya, Malaysia) <i>“Palliative Care in Intensive Care: Malaysian Perspective”</i>	
15.05 – 15.20	<b>Speaker 12</b> Dr. Retno Indarwati, S.Kep., Ns., M.Kep (Universitas Airlangga, Indonesia) <i>“Peer Group Support Toward Stress Relocation Among Elderly in Nursing Home”</i>	
15.20 – 15.35	<b>Speaker 13</b> Dya Sustrami, S.Kep., Ns., M.Kes. (STIKES Hang Tuah Surabaya, Indonesia) <i>“The Comparation of Elderly life Quality index of Urban and Coastal Societies in Surabaya”</i>	
15.35 – 16.00	Plenary Discussion Certificate Conferment	Ballroom Isyaana Hotel Bumi
16.00 – 16.30	<b>Coffee Break and Opening Poster Presentation</b>	
16.30 – 16.50	<b>Speaker 14</b> Dr. Sonia Reisenhofer (La Trobe University, Australia) <i>“Using the World Health Organisation (WHO) guidelines to support women exposed to violence”</i>	
16.50 – 17.05	<b>Speaker 15</b> Dr. Abu Bakar, S.Kep., Ns., M.Kep., Sp. KMB (Universitas Airlangga, Indonesia) <i>“Decreased Cortisol Coronary Heart Patient Who Received Islamic Nursing Care: A pilot Study”</i>	
17.05 - 17.20	<b>Speaker 16</b> Dr. Mundakir, S.Kep., Ns., M.Kep (Universitas Muhamaddiyah Surabaya, Indonesia) <i>“Strategy Model Faster Learning Organization (FLO) as Improvement Effort a Holistic Nursing Services Based on Modelling-Role Modelling Therapy (MRM)”</i>	
17.20—17.50	Plenary Discussion Certificate Conferment & Closing Day 1	

# Early Warning Score System (EWSS) and Length of Stay Patients with Dengue Hemorrhagic Fever

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**Keywords:** Dengue Hemorrhagic Patient, Early Warning Score System, Length of Stay.

**Abstract:** Dengue hemorrhagic fever is a disease from dengue virus accompanied by bleeding and shock. Early Warning Score System may help nurses to predict that risk of critical condition based on vital's sign result. This study was analyze the relationship between EWSS Agregate value and the length of stay in DHF patients. This study used observational design with retrospective cohort approach. The population in this study were DHF patients. The sample were 100 DHF's patients, used probability sampling technique with simple random sampling approach. The instrument on this study used observational paper of EWSS form, analyzed by Spearman rho test. The result shows the most EWSS aggregate value is low risk (91,9%) whereas the length of stay is in category medium stay (73%). Spearman rho test showed that there was relationship between early warning score aggregate value with length of stay in DHF patient with  $p = 0.002$  ( $p \leq \alpha = 0.05$ ) and the correlation coefficient 0,590 ( $r \leq 0,1000$ ). Implications of the results shows that the EWSS Agregate value have a relationship with length of stay in DHF patient. Moreover this study can predict the length of stay DHF patients when they are got an EWSS aggregate value to improve Quality of care in hospital.

## 1 BACKGROUND

Dengue Hemorrhagic Fever (DHF) is an infectious disease that occurs in tropical area frequently. It cause by dengue viruses spread out by *Aedes Aegypti* mosquitoes, and its accompanied by bleeding manifestations which is tends to cause shock and death (Misnidarly 2009; Hikmah and Moroni 2015).

Treatment and nursing care of DHF patients will takes time and intensively care. It refers with increases of vascular's permeability membrane, leading to decreased platelets and plasma leakage. The risk of bleeding or shock, regarding with decreased of platelet's level will impact on the worsening the condition itself. Furthermore, Early Warning Score System (EWSS) is an appropriate observation tool to identify the risk of critical condition in patients or patients at risk of death in hospital (Burch et al. 2008). More higher the score it will reflected the condition getting worse or critical. Critical condition of patients, will impact on the length of their stay in the hospital in order to get treatment intensively. Some studies were carried out on the benefit of Early Warning score system in order to detect the critical condition. However, the

agregate's score of EWSS related with the lenght of DHF's patients stay is still underutilized.

The World Health Organization (WHO) describes cases of dengue fever in worldwide around 50-100 million annually, with 250,000-500,000 cases and 24,000 deaths per year. Ministry of Health of Republic Indonesia stated until 28 August 2014 the number of DHF patients is 48,905 cases with 376 deaths. (Astuti 2016). Meanwhile, in Dr. Ramelan Hospital, one of the biggest hospital in East Java Indonesia, the number of dengue patients in 2016 around 257 patients with the average length of the day hospitalization in range 3-14 days.

In the study conducted by (Siregar 2010) reported that the average length of treatment of DHF patients is a minimum of two days while the longest is 9 days based on platelet count. Previous study reported that Early Warning Score over 4 in the first assessment then the patient would get longer treatment than patients who in the initial assessment received a 0-3 EWS score that only took 48 hours of treatment. Positive results on better clinical outcomes were obtained after introduction of EWS charts in patients with acute conditions (Alam 2014). This suggests that EWS can help accelerate the improvement of the patient's condition by observing through the resulting

EWS score and reducing the length of patient's day in hospital, through recognizing signs of worsening condition.

By Identification of abnormal clinical signs as well as patient health history, and appropriate diagnostic test were tends to predict the risk of adverse outcomes objectively (Burch et al. 2008). However, the deterioration of these clinical signs is often unclear and may occur unnoticed. Furthermore, the development and availability of tools that can described the evidence of clinical deterioration are essential. Ultimately, this can prevent adverse events and improve the patient's condition (Alam 2014).

Early warning score (EWS) is a scoring system used to help detect early deterioration of the patient's condition and reduce unexpected events in the clinical ward associated with the patient's condition (Smith 2012). EWS will help the health worker to identify the emergency situation in the patients which can then be handled from the beginning, so the hospitalization time will be much faster because the patient gets the treatment well and can help improve the hospital service quality. This socialization needs to be done in order to improve the implementation of early warning score on inpatient patients especially in patients with critical condition so that the achievement of patient satisfaction and staff who do the maintenance.

Researchers want to analyze the relationship of early warning score system with length of stay dengue hemorrhagic patients in inpatient wards of the disease based on the above background. Dengue Hemorrhagic Fever (DHF) is an infectious disease that occurs in tropical area frequently. It cause by dengue viruses spread out by *Aedes Aegypti* mosquitoes, and its accompanied by bleeding manifestations which is tends to cause shock and death (Misnidariy 2009; Hikmah and Moroni 2015).

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Early warning score (EWS) is a scoring system used to help detect early deterioration of the patient's condition and reduce unexpected events in the clinical ward associated with the patient's condition (Smith 2012). EWS will help the health worker to identify the emergency situation in the patients which is determine the treatment and nursing care. Turn over Interval (TOI) of hospital bed will influenced by the length of stay each patients, so the length of hospitalization can be minimize if patients get the treatment efficiently. This socialization needs to be done in order to improve the implementation of early warning score on inpatient patients especially in patients with critical condition so that the achievement of patient satisfaction and the staff itself.

Researchers want to analyze the relationship of early warning score system with length of stay dengue hemorrhagic patients in inpatient wards Dr. Ramelan Hospital Surabaya.

## 2 METHODS

This study uses observational design with a retrospective cohort approach. The sample in this study were DHF patients in in-patient wards of Dr. Ramelan Surabaya, which amounted to 100 patients using probability sampling technique with simple random sampling approach. The independent variable is the aggregate value of early warning score and the dependent variable is the length of patient care of DHF. In demographic data the instrument used is an observation sheet filled by researchers consisting of gender, age, Occupation, date of admission, date of discharge, and EWS score. Meanwhile, the observation sheet of EWS aggregate scores and observation of length of day care using day. The data used secondary data in the medical record of the EWS score. Data analysis techniques is Spearman rho test showed that there was relationship between early warning score aggregate value with length of stay in DHF patient with  $\rho = 0.002$  ( $\rho \leq \alpha = 0.05$ ) and the correlation coefficient 0,590 ( $r \leq 0,1000$ .) The length of their stay, based on the day the patient first entered the treatment room until return home. The hypothesis in this study is that there is an association Early Warning Score with the length of day treatment of DHF patients in the Inpatient Room Dr. Ramelan Surabaya.

## 3 RESULTS

Table 1: Aggregate Value of Early Warning Score System DHF patients in inpatient Ward Dr. Ramelan Surabaya (n=100).

EWSS aggregate value	Frekuensi (f)	Percentage (%)
Low	92	92%
Medium	8	8%
High	0	0%
Total	100	100%

Based on table 1, 100 respondents had aggregate value of EWSS with a low score (92%), and moderate score (8%). Table 2 showed that from 100 respondents, there were 16 respondents (16%) short

Table 2: Length of stay DHF patients in inpatient Ward Dr. Ramelan Surabaya (n=100).

Length of Stay	Frekuensi (f)	Percentage (%)
Short Stay ( $\leq 3$ days)	16	16%
Medium Stay (4-11 days)	73	73%
Long Stay ( $\geq 12$ days)	11	11%
Total	100	100%

Table 3: Spearman's rho test of The relationship between EWSS aggregate value and the length of stay DHF patients in Inpatient ward Dr. Ramelan Surabaya (n = 100).

Aggregate value EWSS	Length of Stay			Total
	Short stay (1-3 days)	Medium stay (4-11 days)	Long stay ( $\geq 12$ days)	
Low (0, 1-4)	16 16%	73 73%	3 3%	92 92%
Medium (5-6)	0 0%	0 0%	8 8%	8 8%
Total	16 16%	73 73%	11 11%	100 100%
<i>Spearman Rho test <math>\rho = 0.002</math></i>				
<i>Correlation Coefficient = 0,590</i>				

stay, 73 respondents (73%) medium stay, and 11% respondents were long stay.

In this study, the amount of respondents with EWSS aggregate value and the length of stay of DHF patients in Dr. Ramelan Surabaya, there were low EWSS value and short stay (16%), medium stay (73%), and long stay (3%) respondents. Whereas 8% respondents with EWSS medium value (8%) have long stay care. According to Spearman statistic test results obtained  $\rho$  less than  $\alpha$ ,  $\rho = 0,002 < \alpha = 0,05$ , which means that there is a statistically relationship between the EWSS aggregate value with the length of stay patient with DBD in Dr. Ramelan Surabaya. Then from the results of Correlation Coefficient showed the results of 0.590 which refers to the closeness of the relationship between the aggregate value of EWSS with the length of stay in a medium context.

## 4 DISCUSSION

### 4.1 Aggregate Value Early Warning Score System DHF Patients in Inpatient Room Dr. Ramelan Surabaya

Results of this research, reported that in general DHF patients in inpatient Ward, generally have low aggregate EWSS value as much as 92 respondents (92%). Low EWSS values can be affected by several factors including the age, the severity of the disease, and gender. Majority DHF's patients were in range 17-25 years. In this period, one's body is able to compensate well in ill condition. It assumed the value obtained influenced by the patient's clinical condition which is showed by the increases of body temperature, the pulse and the presence of the respondent using the additional oxygen therapy (nasal canule). Any change in the EWSS component can be an indicator of physiological changes due to the degree of DHF condition. Increased body temperature is a mechanism of the dengue virus inflammation in patients with DHF. Patients may develop to shock dengue fever if the score are increased such as pulse and blood pressure, acral (tip) cold extremities, accompanied by skin congestion. These changes show symptoms of circulatory disorders, as a result of mild or severity of plasma infiltration (Nopianto 2012). Furthermore, the score will add with 2 point if the patients supported by oxygen therapy (Physicians Royal College 2012).

### 4.2 Length of Stay DHF Patient in Inpatient Ward Dr. Ramelan Surabaya

The results obtained that 73% have a medium stay (4-11 days). It means, DHF cases were in moderate treatment, varies depend on their clinical manifestations and the role of health care personnel during the treatment. Patients with DHF is highly potential for bleeding due to changes in homeostasis in the body caused by Dengue virus (Soedarto 2012). We assumed that the length of the day of care related with health's history of patients and their physical condition to adapt and recover. Vital's sign data obtained in average, their respiration rate is 20 times per minute, pulse rate 92 time per minute and 37 degree celcius for the body temperature. Surprisingly, there were 3 (three) female respondents on long stay (>12 days). It was argue that it was related with the anatomy of capillary permeability in

female patients. Kasper DL et al (2009) cited(Nopianto 2012)mention that in female, the clinical manifestation dengue fever is more severe rather than in men. It related with the capillary walls in women tend to increase rather than in men anatomically.

### 4.3 Relationship Between Aggregate Value Early Warning Score System and Length of Stay Dengue Hemmorigic Patients in Dr. Ramelan Surabaya

In this research, it was found that there was significantly relationship between EWSS aggregate value and the length of stay patient with DHF and also the closeness relation both variable was in moderate relationship. It was appropriate with the theories that more higher the aggregate value will impact the worsening condition. The treatment and nursing care will depend on the necessity of body requirements focused on the leakage of plasma into extravascular space. It was a risk for severe bleeding such as petechia, epistaxis, bleeding in gums as well as hemoptisis.

## 5 CONCLUSIONS

The EWSS aggregate value of DHF patients have relationship with their length of stay during hospitalization. It was recommended to measure the EWSS aggregate value in the first and continued assesment in order to identify the condition of patients as well as to identify the appropriate treatment and the quality of nursing care.

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