



FACULTY OF NURSING
UNIVERSITAS RIAU



INSTITUTE OF HEALTH SCIENCE
HANG TUAH PEKANBARU



INSTITUTE OF HEALTH SCIENCE
PAYUNG NEGERI PEKANBARU



INSTITUTE OF HEALTH SCIENCE
TENGGU MAHARATU



SAINT LOUIS
UNIVERSITY
EST. 1863



TAIPEI MEDICAL UNIVERSITY
1960



Maastricht
University



FLINDERS
UNIVERSITY



Prince of Songkla University



THE UNIVERSITY OF
EDINBURGH

PROCEEDING

"PROVIDING A COMPASSIONATE NATURE OF NURSING CARE:

The Challenges and The Opportunities
to Improve Research, Education, Health Care
and Policy Outcomes"



VIRTUAL CONFERENCE

4th R I N C

RIAU INTERNATIONAL NURSING CONFERENCE

4-5 NOVEMBER | 2020



9 786025 309922



PROCEEDING

VIRTUAL CONFERENCE

4th RINC

RIAU INTERNATIONAL NURSING CONFERENCE

“PROVIDING A COMPASSIONATE NATURE OF NURSING CARE:

The Challenges and The Opportunities
To Improve Research, Education, Health Care
and Policy Outcomes”

4-5 NOVEMBER 2020

Pekanbaru

Indonesia

Publisher :

FACULTY OF NURSING

UNIVERSITAS RIAU



PROCEEDING

PROVIDING A COMPASSIONATE NATURE OF NURSING CARE:

The Challenges and The Opportunities
To Improve Research, Education, Health Care
and Policy Outcomes

Editor:

Ns. Sri Wahyuni, M.Kep, Sp. Kep. J, PhD
Ns.Nada Cindya, S.Kep

Reviewer:

Ns. Sri Wahyuni, M.Kep, Sp. Kep. J, PhD
Wan Nishfa Dewi, S.Kp, MNg, PhD
Ns.Bayhakki, M.Kep., Sp.KMB, PhD
Erika, M.Kep., Sp.Mat, PhD
Ns. Agrina, M.Kep, Sp. Kep. Kom, PhD

Cover Design and Lay Out:

Masrizal

Publishing:

Faculty of Nursing, Universitas Riau

Address:

Campus UNRI Gobah
Jl. Pattimura No.9, Gedung G, Phone. +62 761 31162, Pekanbaru, Indonesia

CONFERENCE COMMITTEE
RIAU INTERNATIONAL NURSING CONFERENCE 2020
FACULTY OF NURSING, UNIVERSITAS RIAU

- Advisory Board** : Prof. Dr. Ir. Usman M Tang, MS
Wan Nishfa Dewi, S.Kp, MNg, Ph.D
Erwin, S.Kp, M.Kep
- Steering Committee** : Prof. Dr. Ir. Usman M Tang, MS
Wan Nishfa Dewi, S.Kp, MNg, Ph.D
Erwin, S.Kp, M.Kep
Ns. Wasisto Utomo, M.Kep, Sp.KMB
Ns. Agrina, M.Kep, Sp. Kep. Kom, Ph.D
Ns. Bayhakki, M.Kep, Sp. KMB, Ph.D
Ns. Yufitriana Amir, S.Kep, MSc, Ph.D
Ns. Sri Wahyuni, M.Kep, Sp. Kep. J, Ph.D
Erika, M.Kep, Sp. Mat, Ph.D
Dr. Reni Zulfitri, M.Kep, Sp. Kep. Kom
Dr. Widia Lestari, M.Kep
- Chairperson** : Ns. Sri Wahyuni, M.Kep, Sp. Kep. J, Ph.D
Secretary : Ns. Yulia Rizka, M.Kep
Treasurer : Ns. Wandha Paramitha Dhuangga, S.Kep
- Scientific Committee** : Erika, M.Kep, Sp. Mat, Ph.D
Ns. Sri Wahyuni, M.Kep, Sp. Kep. J, Ph.D
Wan Nishfa Dewi, S.Kp, MNg, Ph.D
Ns. Bayhakki, M.Kep, Sp. KMB, Ph.D
Ns. Yufitriana Amir, S.Kep, MSc, Ph.D
Ns. Agrina, M.Kep, Sp. Kep. Kom, Ph.D
Dr. Widia Lestari, M.Kep
Ns. Wasisto Utomo, M.Kep, Sp.KMB
Ns. Gamyia Tri Utami, M.Kep
Rismadefi Woferst, M.Biomed
Ns. Yulia Rizka, M.Kep
Veny Elita, MN (MH)
Riri Novayelinda, S.Kp, MNg
Ns. Fathra Annis Nauli, M.Kep, Sp. Kep. J
Dr. Reni Zulfitri, M.Kep, Sp. Kep. Kom
Oswati Hasanah, M.Kep, Sp. Kep. An
Ns. Yulia Irvani Dewi, M.Kep, Sp. Mat
Dr. Mitra SKM, MKM; (Hangtuah)
Ns. Shinta Dewi Kasih B, S.Kep., M.Kep (Maharatu)
Betty Nia Rulen, SKM., M.Si; (Maharatu)
Desti Purwati, M.Kep (PN)

Conference Chair Message



Ns. Sri Wahyuni, M.Kep., Sp. Jiwa., Ph. D

Assalamu'alaikum, Wr. Wb

On behalf of the organizing committee, I am very pleased to be able to welcome those of you to Riau International Nursing Conference (RINC) 2020. Unlike the last year's conference, we have to held this conference through virtual because of the outbreak Covid-19. This situation challenges us to keep being active and innovative in order to spread the knowledge around the world.

We are very proud to be able to host the virtual RINC, colaborated with STIKes Hangtuah, STIKes Payung Negeri, and STIKes Tengku Maharatu Pekanbaru Riau. This year, RINC has general theme "Providing a Compassionate Nature of Nursing Care: The Challenges, and the Opportunity to Improve Research, Education, Health Care and Policy Outcomes" with distinguish speaker from USA, UK, Australia, Taiwan, Thailand and Indonesia. We can learn more about these invited speakers and their presentations on this RINC.

I would like to express my sincere appreciation to all of you who has made this conference possible: Rector of Universitas Riau, Dean of Faculty of Nursing Universitas Riau, the Head of STIKes Hangtuah, STIKes Payung Negeri, and STIKes Tengku Maharatu, the committee of RINC 2020, and the participants. We couldn't have done it without you! And I would like to thank our invited speakers for agreeing to take time out of their busy schedules to share their knowledge.

Through this conference I wish that we will be learning about nursing that help us grow to more productive and smart. A very warm welcome to each and every one of you.
Wassalamu'alaikum, Wr. Wb

Chairman of Riau International Nursing Conference 2020
Ns. Sri Wahyuni, M.Kep., Sp. Jiwa., Ph. D

CONTENTS

Conference Committee.....	iv
Conference Chair Message.....	v
Contents.....	vi
Conference Program.....	ix
Greetings From Dean Faculty Of Nursing Universitas Riau.....	xii
Greetings From Acting Rector, Universitas Riau.....	xiii
Plenary Sessions Summaries.....	xiv

List Of Oral Presentation

1. The Effect of Infused Water on Weight Loss in Overweight Patients Aged ≥ 18 Alini, Nila Kusumawati, Awalia Ramadhania	1
2. The Impact of Laceration Types and Cold Gel Applications on Perineal Wound Pain With Vaginal Delivery Bina Melvia Girsang	4
3. The Effectiveness of Sesame Oil for the Prevention of Pressure Ulcer in Patients with Bed Rest Undergoing Hospitalization Chrisyen Damanik, Sumiati Sinaga, Kiki Hardiansyah.....	8
4. The Relationship Between Sex and Stroke Prevention Behavior to Hypertension Sufferer in Working Region of Jatibarang Public Health Center, Indramayu Dedeh Husnaniyah, Titin Hidayatin, Eka Juwita Handayani.....	12
5. Detection of Muscle Strength Signal with Progressive Muscle Relaxation Exercise Based on Arduino Uno on the Elderly in Indonesia Eqlima Elfira, Bina Melvia Girsang	15
6. Mental Health Problem Resolution Model on College Students: A Literature Review Fathra Annis Nauli, Sri Wahyuni, Ririn Muthia Zukhra.....	19
7. Correlation Between Diet Diversity and Toddler's Nutritional Status Ganis Indriati, Yufitriana Amir, Yulia Irvani Dewi	24
8. Variables Predicting for Duration of Mechanical Ventilator on Icu Patients: Retrospective Study Hellena Deli, Hetty Yuliana.....	28
9. The Effect of Spiritual Counseling on Increased Elderly Spirituality Herlina, Agrina	33
10. Mental and Emotional Problems in Adolescents Jumaini, Sri Wahyuni, Fathra Annis Nauli.....	37

11. Knowledge and Prevention of Covid-19 by Aircraft Passengers in Riau Province Lius Parna, Nila Kusumawati, Putri Eka Sudiarti, Alini	41
12. Education-Based Intervention on Feeding Practices of Mothers with Stunted Children at Age 6-24 Months Maria Susana Ine Nona Ringgi, Yosephina Maria Hawa Keytimu	45
13. The Effect of Progressive Muscle Relaxation and Qur'an Murottal to Older People Hypertension Pera Putra Bungsu, Dewi Kurniawati	48
14. Public Perception of Covid-19 Sufferers, Families, and Corpse in Riau Province Ari Pristiana Dewi, Agrina, Arneliwati	52
15. The Correlation Between the Perceptions on Parenting Style Martina Desri Nurafisa, Raja Fitriana Lestari, Agnita Utami.....	56
16. Sociodemographic Characteristics of Elderly with Hypertension and Cognitive Functions Reni Zulfitri, Ari Pristiana Dewi, Didi Kurniawan	61
17. Effect of Time Management, Motivation and Self-Efficacy on the Learning Achievement of Nursing Students Reni Asmara Ariga, Siti Zahara Nasution, Cholina Trisa Siregar	65
18. Application of Nursing Management: Horas Program to Improve Compliance Pulmonary Tuberculosis Medication Reni Asmara Ariga, Roymond H Simamora, Siti Zahara Nasution, Cholina Trisa Siregar, Lufthiani, Ikhsanuddin Ahmad Harahap, Fajar Amanah Ariga, Selviani Ariga, Sri Budi Astuti	69
19. The effect of Foot Massage with Khofanun Oil on Anxiety of Hypertension Patients in Maini Darul Aman Village West Tebing Tinggi District, Meranti Islands Rizka Febrina, Nur Syafridawati, Wardah	74
20. Formulation of Gel Aloe Vera Linn (Aloe Vera Linn) to Prevent Premature Aging Safri, Benni Iskandar	78
21. Early Detection of Anemia in Pregnancy By "HELILI" Method for Stunting Prevention Sri Utami, Erika	83
22. Nursing Students' Perspectives on the Implementation of Clinical Teaching in Clinical Placement Veny Elita, Riri Novayelinda	83
23. Overview of the Implementation of Patient Safety in Indramayu Wiwin Nur Aeni, Bambang Eryanto, Bestina Nindy Virgiani	92

24. The Effectiveness Of The Assistance Program For Breastfeeding Mothers By <i>Posyandu</i> Cadres On The Duration Of Exclusive Breastfeeding In The Suburban Area Of Pekanbaru City Widia Lestari, Widyawati	95
---	----

**CONFERENCE PROGRAM
VIRTUAL CONFERENCE
RIAU INTERNATIONAL NURSING CONFERENCE (RINC) 2020
4th – 5th November 2020**

Day 1: Wednesday, November 4th, 2020

No	Time	Activities	Chair Person
	08.00-08.30 WIB	Zoom Room Open	Committee
1	08.30-08.40 WIB	Video Profile Faculty of Nursing, Universitas Riau	
2	08.40-08.50 WIB	Opening	Committee
3	08.50-08.55 WIB	Indonesia National Anthem: Indonesia Raya	
4	08.55-09.00 WIB	Qur'an Recitation	
5	09.00-09.10 WIB	Du'a	Ns. Alfian Konandi, S.Kep
6	09.10-09.20 WIB	Welcoming Speech by Chairman of the Committee	Ns. Sri Wahyuni, Ph. D
7	09.20-09.25 WIB	Welcoming Speech by The Dean of Faculty of Nursing, Universitas Riau	Prof. Dr. Ir. Usman M. Tang, MS
8	09.25-09.30 WIB	Opening Speech by Rector of Universitas Riau	Prof. Dr. Ir. H. Aras Mulyadi, M.Sc
9	09.30-09.40 WIB	Photo session	
		Keynote Speakers Sessions	Moderator
10	10.00-10.30 WIB (10.00-10.30 AM Thailand Time)	Assoc. Prof. Dr. Nongnut Boonyoung (Thailand)	Moderator
	10.30-10.45 WIB (10.30- 10.45 AM Thailand time)	Discussion Session	
11	10.45-11.15 WIB (02.45-3.15 PM, Australian Time)	Dr. Fathimah Shifaza, PhD, MSc, RN, RM (Australia)	Moderator
	11.15-11.30 WIB (3.15-3.30 PM, Australian Time)	Discussion Session	
12	11.30-12.00 WIB (Indonesian Time)	Erika, SKp., M.Kep., Sp Mat., PhD.,	Moderator
	12.15-12.30 WIB	Discussion Session	
13	12.30-13.30 WIB	Break	

Video Presentations (Paralel Sessions)			
14	13.30-13.35 WIB	Video profile Co-Host STIKES Hangtuah Pekanbaru	
15	13.40-15.25 WIB	Video Presentations (Paralel Sessions) and discussion	Committee
16	15.25-15.30 WIB	Closing for the Day 1	Committee

Day 2: Thursday, November 5th, 2020

No	Time	Activities	Chair Person
1	08.00-08.25 WIB	Zoom Room Open	Committee
2	08.25-08.30 WIB	Opening	Committee
3	08.30-09.00 WIB (08.30-09.00 PM USA Time)	Keynote Speakers Session Prof. Joanne Kraenzle Schneider, PhD., R.N (USA)	Moderator
	09.00-09.15 WIB (09.00-09.15 PM USA Time)	Discussion Session	
4	09.15-09.20 WIB	Video profile Co-Host STIKES Payung Negeri	
5	09.20-12.00 WIB	Video Presentation (Paralel Sessions) and discussion	Committee
6	12.00 WIB	Break	
		Keynote Speakers Sessions	Moderator
7	13.00-13.05 WIB	Video profile Co-Host STIKES Tengku Maharatu	
8	13.05-13.35 WIB (02.05-02.35 PM Taiwan Time)	Prof . Hsu Ji Chang, RN, PhD (Taiwan) Title : Mental Health in Young People	Moderator
	13.35-13.50 WIB (02.35-02.50 PM Taiwan Time)	Discussion Session	
9	13.50-14.20 WIB (7.50.-8.20 AM, Netherland Time)	Irma Everink, MSc., PhD (Netherland)	Moderator
	14.20-14.35 WIB (8.20- 08.35 AM, Netherland Time)	Discussion Session	

10	14.35-15.05 WIB (7.35-08.05 AM, Edinburgh Time)	Dr. Martina Balaam, PhD, MSC, RGN, RNT (Edinburgh)	Moderator
	14.45-15.00 WIB (08.05-08.20 AM, Edinburgh Time)	Discussion Session	
		Closing Ceremony	Moderator
11	15.00-15.10 WIB	Reporting Speech by Chairman of Committee	Ns. Sri Wahyuni, Ph. D
12	15.10-15.20 WIB	Closing Speech by the Dean of of Faculty of Nursing, Universitas Riau	Prof. Dr. Ir. Usman M. Tang, MS
13	15.20-15.25 WIB	Du'a	Ns. Alfian Konandi, S.Kep
14	15.25-15.30 WIB	Closing	Committee

Prior to the session:

- Evaluator should come to the Scientific Corner no later than 10 minutes prior to the session to obtain a poster presentation map and scoring rubric and fill out the presenter name, number, and presenter name on the poster presentation scoring rubric before the session begin
- Presenter/author should stand by at their posters display 5 minutes before poster session.

During and at the end of the session

- Presenter/author presents their posters to evaluator.
- Evaluator will have maximum 10 minutes to have a discussion with the presenter and to evaluate the poster according to the scoring rubric.
- Presenter/author will not be allowed to use computers or other electronic devices during presentation.

Evaluator delivers the scoring results to the student in charge

Greetings from Dean of Faculty of Nursing, Universitas Riau



Prof. Dr. Ir. Usman M. Tang, MS

On behalf of the Faculty of Nursing, University of Riau, Pekanbaru, I would like to convey my sincere congratulations on RINC 2020 (Riau International Nursing Conference 2020) in Pekanbaru Sumatra Indonesia. This year RINC brings the theme: Providing A Compassionate Nature of Nursing Care: The Challenges and The Opportunities to Improve Research,

Education, Health Care and Policy Outcomes". I am very much pleased to present the Riau International Nursing Conference in Pekanbaru, The land Of Malay as this conference plays a significant role in the nursing academia, particularly for nurse practitioners, nurse educators and nursing students in Indonesia. This is the perfect time to build research connection and share knowledge from different perspectives of nursing research and education. My best wishes for the successful of RINC 2020 Conference and hope all participants have productive time during the conference.

Kind Regards,

A handwritten signature in blue ink, appearing to be 'U. M. Tang', written over a horizontal line.

Prof. Dr. Ir. Usman M. Tang, MS

Greetings from Rector, Universitas Riau



Prof. Dr. Ir. H. Aras Mulyadi, M.Sc

Assalamu'alaikum, Wr. Wb

A very good morning and warm welcome to my distinguish keynote speakers, commitees, speakers and participants. I do take this moment to congratulate Faculty of Nursing especially the committe on their hardworking effort have been given on conducting this Riau International Nursing Conference (RINC) 2020, in conjunction with UNRI 58th Anniversary this year.

This Conference have general theme “Providing A Compasionate Nature of Nursing Care:The Challanges and The Opportunity to Improve Reasearch, Education, Health Care and Policy Outcomes”. We hope this regular conference will give severe academic impacts on Universitas Riau good academic atmosphere, especially to drive Faculty of Nursing staff and student to increase their capacity of Research, Education, and Health Care on Nursing.

From this conference we can receive benefits such as gaining experience from keynote speaker’s research presentation, upgrading participant’s knowledge and capacity on conducting research and education, and having opportunity to have link with reseacher among participant were involved. Thanks God, in amid of Covid-19 we still have an opportunity to convere this conference successfully. Congratulate for commitee and all keynote speakers and participants, enjoyed the conference. Amin.

Rector Universitas Riau,

Prof. Dr. Ir. H. Aras Mulyadi, M.Sc

PLENARY SESSIONS SUMMARIES

Speaker 1



Associate Prof. Nongnut Boonyoung, RN, Ph.D
Faculty of Nursing, Prince of Songkla University, Thailand

Strategy for Enhancing Quality of Life of the Elderly: Indonesia Context

At present, one common global health issue is a challenging care for the elderly. Each country has been encountered with a rapid growth of the elderly population including in Indonesia. Potential factors encourage such an increasing number are well documented. Some possible approaches to promote a better quality of care for the elderly are identified in a variety dimensions as well as in different levels from governmental policy down to operational actions in the nursing institutions.

We as healthcare personnel who are presumed or expected to be a group among healthcare professional that can take charge to strengthen the elderly's quality of life who live both nearby and distancing. Strategies to cover needs from demand side-the elderly can categorized in promotion, prevention and rehabilitation that congruent with the elderly context, culture, and complex-layers of the environment.

Strategies from supply side in healthcare system in order to enhance a better quality of life among the elderly are challenging. Those strategies are calling awareness and attention from all involved stakeholders including governmental sector, private sector, and academic sector. Nurses at all setting should be able to understand the situation regarding the needs and painpoint of the elderly in all aspects, then the nurses are able to illustrate the current and futuristic scenarios to approaches for these needs.

Nursing profession with a holistic background allows all nurses to co-create a nursing model that facilitate individual or group of clients and family members, networks be able to receive/access a proper care and other assistance to maintain their life, live longer, while holding their self-value in the community/society. In addition, A need for getting training regarding gerontology and a deep profound understanding the existing mechanism in healthcare system regarding long-term care, supporting for being active aging/pro-active aging and contribution of networking to strengthening the nurses' capacity at all setting should get the priority

Speaker 2



Dr. Fathimah Shifaza, Ph.D, MSc, RN, RM
College of Nursing and Health Sciences, Flinders University, Australia

How Does Evidence-Based Practice Contribute to Nursing?

Evidence-based practice (EBP) has become the most significant development in healthcare in the last 2 decades. However, it is an emerging challenge for many healthcare organisations to convey the importance of EBP in ensuring patient safety and optimising outcomes.

In spite of many significant advances, nurses still have more to do to achieve EBP across the board. A recent survey of the state of EBP in nurses indicated that, while nurses had positive attitudes toward EBP and wished to gain more knowledge and skills, they still faced significant barriers in employing it in practice (Shifaza, Hamiduzzaman and Pront 2019).

A number of EBP models were developed by nurses to understand various aspects of EBP. These frameworks guide the design and implementation of approaches intended to strengthen evidence-based decision making. This presentation describes the application of EBP into day to day practice using EBP Champion Model (Shifaza, 2014). The model has the following steps: 1. Assessing the organisation and readiness for EBP, (2) Developing EBP Champions; (3) Implementing and Evaluating practice change. The model provides a pragmatic, theory-driven framework for empowering clinicians in the process of EBP.

The presentation concludes with discussion of the next big ideas in EBP and considers opportunities and challenges as EBP continues to support other exciting new thinking in healthcare.

Speaker 3



Erika, SKp., M.Kep., Sp Mat., Ph.D
Faculty of Nursing, Universitas Riau, Indonesia

COVID- 19 and Pregnancy

Covid-19 is an infectious disease caused by a new type of coronavirus that was recently discovered (SARS-COV-2). It should be emphasized that Covid-19 is a new disease that is still being researched and studied by health experts and scientific researchers, including its impact on pregnancy outcomes.

Pregnant women have the same risk of being infected with Covid-19 compared to other adults who are not pregnant. Pregnant women with positive Covid-19 without symptoms also have a high incidence rate in Indonesia (13.8%). On the other hand, we also know that pregnant women, due to changes in their body and immune system, have an increased risk of several respiratory infections, including influenza. Because there are still many things we don't know about this Covid-19 infection, pregnant women should try to protect themselves as much as possible from infection. Although there is still limited data about how pregnancy can be affected by the virus, pregnant women do not appear to become more unwell than other healthy adults who contract it. Like the general population, if they are infected, the vast majority of pregnant women will have mild or moderate symptoms and recover. These include cough, fever, and shortness of breath, headache and loss of sense of smell. Pregnant women with serious heart problems are in a very high-risk group and it is recommended that they stay at home at all times and avoid any face-to-face contact. Indeed, some viruses are worse in pregnant women, but there is limited data and limited evidence for this coronavirus.

How should a pregnant woman deal with COVID-19.? Although data related to vertical transmission has not been found in pregnant women with COVID-19, several interventions can be applied to treat patients with confirmed COVID-19 and nurses can play a role in providing counseling in this regards; carrying out antepartum management in pregnant women with suspected or confirmed COVID-19, notification of attending officers, infection control and public health, contact precautions, counseling pregnant women about the possible effects of COVID-19 on maternal and pregnancy outcomes (possible risk of failure maternal breath, possible need for iatrogenic preterm labor, possible complications of pregnancy, including spontaneous abortion, intra-uterine fetal death, premature rupture of membranes, and preterm labor), do limited antenatal care, online consultation, provide counseling regarding complications such as hyperemesis, abortion, IUFD, and psychosocial problems.

Speaker 4



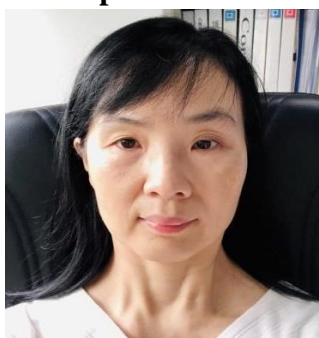
Prof. Joanne Kraenzle Schneider, Ph.D., R.N
Faculty of Nursing, Saint Louis University, United State of America

Living Our Compassionate Nature

We can read about compassion. We can study compassion. But true compassion comes from our hearts. As nurses, we need to learn to bring compassion into all that we do, whether it is our research, teaching, providing patient care, developing policy, or simply being with others. In this presentation, Dr. Schneider will focus on how to foster our compassionate nature and bring it into all aspects of our lives.

We are all traveling our human experience, much of it is not within our control. We are all doing our best at any moment in time. Our paths are unique, and therefore we cannot EVER fully understand another. Compassion shows awareness of the unfolding human experience. Compassion is the ability to see past that human experience, look past all of the thoughts that enter our head (thoughts of judgment, thoughts of things to do, etc) and be fully present anyway. Compassion is BEING WITH the one before us. Thus, compassion is the extension of love without regard to the path and without getting stuck at thoughts.

Speaker 5



Prof . Hsu Ji Chang, RN, Ph.D

Faculty of Nursing, Taipei Medical University, Taiwan

Mental Health in Young People

Youth is the stage at which most mental disorders, often detected for the first time in later life, begin. Young people have a high rate of self-harm, and suicide is a leading cause of death in young people. Although it is widely acknowledged that suicide-related behaviours are closely linked to several risk factors, such as the pathological environment, psychological distress and psychiatric disorders, researchers have noted that suicidality may be multidimensional. Therefore, an increasing number of researchers have recommended that a comprehensive assessment of suicidal behaviour in adolescents and young adults incorporate both protective factors and negative risk factors. The new instrument, the Positive and Negative Suicide Ideation (PANSI), was developed for the purpose of assessing Positive Ideation and Negative Suicide Ideation. Lewinsohn et al. (1995) developed a Life Attitude Schedule (LAS), which is a risk assessment for suicidal and life-threatening behaviors. The LAS encompasses a unique and comprehensive conceptualization of suicide proneness, measures a broad range of suicidal behaviors, and incorporates both positive life-enhancing and negative life-threatening behaviors. The first aim of the serial studies was therefore to test the psychometric properties of the PANSI and LAS. Results showed that the Chinese versions of both PANSI and LAS had satisfactory reliability and validity in Taiwan.

In the cognitive theory of suicide, cognition is the central component in suicidality. Suicidal individuals tend to have dysfunctional views of the self, the future, and the world. This negative pattern is termed the “negative triad.”

According to Alford and Beck, the nature of this model is mediating, and the relationship between the cognitive triad of suicide and other psychological and biological systems is interactive. Cognitive behavior therapies emphasize the mediating role played by cognitive processes in psychopathology. Therefore, the second aim of the serial studies was to test the mediating and moderating roles the cognitive triad plays in the relationship between depressive symptoms and suicidal ideation in a sample of school-aged adolescents. As predicted, an adolescent’s cognitive triad was found to mediate and moderate relationships between depressive symptoms and suicidal ideation.

The third aim of the serial studies was to examine the effectiveness of group cognitive behavior therapy for community adolescents at risk for depression and suicide. Students in the experimental groups received CBT plus parental education (group A) or CBT alone (group B). The control group was designed as a waiting list group. Results demonstrated that compared with the CBT-alone and control groups, adolescents in the CBT with parental education group showed significantly improved depressive symptoms, suicidal ideation, and cognitive triad.

Speaker 6



Irma Everink, Ph. D

Department of Health Services Research and Care And Public Health Research Institute (CAHPRI), Maastricht University, Maastricht, the Netherlands

International Prevalence Measurement of Care Quality: A multi-country project to gain insight into the quality of basic nursing care

Measuring quality of care is complex and there is not one model of method which captures all aspects of quality of care. One important component of care quality is the presence of absence of care problems. The International Prevalence Measurement of Care Quality (In Dutch: LPZ), developed by Maastricht University (the Netherlands) is a yearly international prevalence measurement of care problems pressure injuries, incontinence, malnutrition, falls, restraints and pain. Besides measuring the prevalence of these care problems, it also assesses which preventive measures and treatment is used. The measurement is performed in five different countries (the Netherlands, Austria, Switzerland, the UK and Turkey) and in different healthcare settings, using an identical methodology. The aim of this measurement is twofold: providing organizations feedback on their care quality and using the data to perform scientific research. This presentation will focus on the development and use of the instrument, its content and the social and scientific impact the instrument has.

LIST OF ORAL PRESENTATION

THE EFFECT OF INFUSED WATER ON WEIGHT LOSS IN OVERWEIGHT PATIENTS AGED ≥ 18

Alini¹, Nila Kusumawati², Awalia Ramadhania³

^{1,2,3}School of Nursing, University of Pahlawan Tuanku Tambusai
alini_09@yahoo.com

Abstract

Objective: The purpose of this study was to determine the effect of infused water on weight loss in overweight patients aged ≥ 18 . **Method:** The research design was quasi experimental with one group pretest-posttest design. Pretest was done one day before intervention and posttest after seven days of intervention. The study population was overweight sufferers aged ≥ 18 at Simpang Tiga Pekanbaru Public Health Center, totaling 1.357 in population. Purposive sampling technique was applied with a sample size of 30 people. Measuring instrument used was the observation sheet to determine body weight before and after the intervention. The analysis used was univariate and bivariate using the T-test. **Result:** The result showed the effect of infused water on weight loss with a p-value of 0.000 ($p < 0.05$). **Conclusion:** The average weight loss after seven days of intervention was 0.5 gr. Overweight patients are advised to use infused water as an alternative therapy for weight loss.

Keywords: Body Weight, Infused Water, Overweight

Introduction

Weight gain is the accumulation of excess fat in the body that occurs in adipose tissue throughout the body. Overweight is divided into two groups. They are overweight and obesity¹. More than 1.9 billion adults aged ≥ 18 years and over are overweight. From this number, there are more than 600 million are overweight or overweight. The highest prevalence of overweight was in Uruguay (18.1%), Western Europe (13.9%), Costa Rica (12.4%), Chile (11.9%), and Mexico (10.5%)². Indonesia is in 10th place with the most overweight population after Pakistan and

Germany. According to the Basic Health research finding in 2013, overweight in Indonesia reached 14.8% and in 2018 increased to 21.8%. The highest number of overweight sufferers was in North Sulawesi with 16.3%, in East Kalimantan 15.5% and Riau Province

The prevalence of overweight in Riau Province shows that the highest prevalence is in Siak Regency (20.7%) and Pekanbaru City (12.1%).

Overweight surely has a negative impact on the sufferer. The impacts occur are both physically and psychologically⁴. Several ways to deal with overweight are through regular diet, exercise, and alternative therapy, namely infused water. Infused water is an alternative therapy for those who want an ideal body weight. Infused water is pure water with a mixture of fruits, vegetables or herbs.

Based on a research conducted by Bhatia and Sharaswat⁵, there were 26 samples who were given 500 ml warm water and cinnamon for 12 weeks. It shows that infused water can reduce the weight of research subjects by ± 10 kilograms. Based on a preliminary survey conducted on 15 people who are overweight in the working area of the Simpang Tiga Public Health Center Pekanbaru, the efforts that they have made to lose weight are consuming dietary drugs, reducing diet and buying products to lose weight. However, these efforts have not been successful. Overweight sufferers do not know yet that infused water can help them to lose weight. Based on the above phenomena, there is limited research on using infused water for weight loss, especially in Riau Province. Thus, the study was conducted

to explore the effect of infused water on weight for overweight patients aged ≥ 18 years in Simpang Tiga Public Health Center, Pekanbaru City, Riau Province.

Method

This study employed a quantitative research design with a pre-experimental approach with one group pretest-posttest. This research was conducted on June, 2020 in Simpang Tiga Public Health Center, Simpang Tiga sub-district, Bukit Raya district, Pekanbaru municipality, Riau province, Indonesia. The population of the study was taken from the classification of body weight in the number of overweight patients with a total of 1.357 people. The number of samples was 30 people. The sampling technique used was purposive sampling. The instrument used in this study was the observation sheet to measure body weight before and after receiving the treatment.

The data collection technique in this study was the test method which was conducted before (pretest) and after giving the treatment (posttest). The test was in form of the measurement of body weight using a weight scale that was carried out before consuming infused water and after consuming infused water. The data analysis used was Paired Sample T-test.

Results

The research was conducted by giving 1.500 ml infused water to the research subjects every morning at 7 a.m. every day for seven days. The research findings are presented in the following tables:

Table 1

Respondent Characteristic			
No	Category	Total	Percentage
Age			
1.	a. 18 – 25 years old	20	66.7%
	b. 26 – 35 years old	8	26.7%
	c. 36 – 45 years old	2	6.6%
Total		30	100%
Gender			
2.	a. Male	9	30.0%

b. Female	21	70.0%
Total	30	100%

Table 1 showed that the majority of the research subjects were between 18-25 years old late adolescents with the total of 20 participants (66.7%). The majority of the participants of this study were female (70%).

Table 2

The Average of Body Weight Pre-Test

Variable	Mean	SD	Min-Max
Body weight Pre-test	65.1	10.0228	53.0 – 87.3

Table 2 showed that the mean of pretest of body was 65.1 kgs with a standard deviation of 10.0228.

Table 3

The Average of Body Weight Post-Test

Variable	Mean	SD	Min-Max
Body weight Post-test	64.6	10.1230	51.0 – 86.1

Table 3 showed that that the average body weight after being given infused water therapy is 64.6 Kgs with a standard deviation of 10.1230.

Table 4

The Comparison of the Body Weight Average Before and After Being Given Infused Water

Variable	Mean	SD	SE	P Value	N
Body Weight Pre-test	65.1	10.0228	1.8299	0.000	30
Body Weight Post-test	64.6	10.1230	1.8482		

Based on table 4, it could be seen that the average body weight before being given infused water was 65.1 with a standard deviation of 10.0228. The mean of body weight after being given infused water was 64.6 with a standard deviation of 10.1230. It also showed the difference of average body weight between before and after being given infused water was 0.5 gr. The results of the T-test statistical test showed that the P value was 0.000

($P < 0.05$). It could be concluded that there was a significant difference between body weight before and after being given infused water.

Discussion

The average weight loss occurs in the late adolescence period (18 years old - 25 years old). According to Prima and Sari (2013), in the age of 18-25, people still pay attention to their body shape and frequently do not feel confident if they continue to gain weight. At this age, they tend to be easily influenced by impulses in food and drink intake to make changes to weight loss.

Furthermore, weight loss is also affected by gender in which women and men surely have different needs of calorie. Gender is one of the factors that determines a person's nutritional needs⁷ explains that infused water is a new trend and style for healthy living for those who do not like or are not into fruits or having limited time to consume fruit. Besides, it can also encourage someone to consume more water. Fruits that are used for infused water are those that contain vitamin C, which can metabolize the body 30% faster to lose weight. Consuming enough water for 30 minutes before eating can also lose weight⁸

The results of the T-test in this study showed a P-Value is 0.000 with an average weight loss of 0.5 gr, whereas in previous studies, the P-value was 0.002 with an average of 0.5 gr of weight loss. This is in line with a theory which explains that to get a large amount of weight loss results, it also takes a long time⁶. To lose weight, at least do it for one week with a total weight loss no more than 1 kg.

Conclusion

Based on the research findings, it can be concluded that there is an effect of infused water on losing weight with a p-value 0.000 ($p < 0.05$). The study findings showed that the infused water significantly decreased the body weight. As such, the infused water can be used as one of alternative therapies for those with unideal body weight.

Acknowledgement

We would like to thank you all the study participants, the Rector, Vice Rectors and

Research and Community Development of Universitas Pahlawan Tuanku Tambusai.

References

1. Batubara, J. R. Juniarti, T. M., Damanik, H. A., & Lubis, S. M. *Hubungan Asupan Karbohidrat, Asupan Lemak, Asupan Serat, Aktifitas Fisk Dan Kebugaran Jasmani Remaja Overweight (Studi Siswa/I Smp Negeri 1 Sanggau)* (Doctoral Dissertation). 2010.
2. World Health Organization. World health statistics 2014 library cataloguing-in-publication Data [accessed 14 March 2020]. Available at <http://www.who.int/mediacentre/factsheets/fs311/en/>. 2014
3. Kementrian Kesehatan. Riset Kesehatan Dasar 2013. [Accessed 14 March 2020]. Available at <http://kemenkes.go.id>. 2020.
4. Prameswari. Hubungan obesitas dengan konsep diri remaja. <http://respository.unand.ac.id>. [Accessed 14 March 2020]
5. Bhatia Shivani, Shubhra Saraswat. Effect of japan water therapy infused with cinnamon on body weight, waist/hip ratio, and body mass index of overweight and obese subjectsshivani. *Asian journal of pharmaceutical and clinical research*. Vol 12, Issue 9. 2019. [Accessed 14 March 2020]. Available at <https://www.researchgate.net>.
6. Wulandari, R & Rahmanisa, S. Pengaruh ekstrak teh hijau terhadap penurunan berat badan pada remaja. *Jurnal Majority*, 5(2),106-111. [Accessed 14 March 2020]. Available at <http://joke.kedokteran.unila.ac.id>. 2016.
7. Mulyasari. Pengaruh asupan air putih terhadap berat badan, indeks massa tubuh, dan persen lemak tubuh pada remaja putri yang mengalami gizi lebih. [Accessed 14 March 2020]. Available at *Jurnal gizi Indonesia*. <http://ejournal.undip.ac.id>. 2015.
8. Indri, Muaris. Infused water: Tren gaya hidup minum air putih. [Accessed 14 March 2020]. Available at <https://books.google.co.id/books>. 2015.

THE IMPACT OF LACERATION TYPES AND COLD GEL APPLICATIONS ON PERINEAL WOUND PAIN WITH VAGINAL DELIVERY

Bina Melvia Girsang¹

¹ School of Nursing, University Sumatera Utara
binamelvia@usu.ac.id

Abstract

Objective: This study aims to determine the effect of cold gel application and types of episiotomy laceration on perineal wound pain response of postpartum mothers with normal delivery. **Method:** Several types of episiotomy were performed, and cold gel was applied to the perineum of 31 postpartum mothers at home in the work area of Pantai Cermin. Furthermore, the subjects were selected using a purposive sampling technique. Measurement of pain response was carried out using a numeric rating scale. Also, Wilcoxon and Kruskal Wallis statistical tests were conducted to analyze the effects on pain response. **Result:** The analysis showed that there was a difference in the mean score of perineal wound pain after cold gel application ($p = 0.000$). But, the types of episiotomy laceration caused no difference in the score ($p > 0.005$). **Conclusion:** Episiotomy education and application of cold therapy are needed by health workers as self-care methods that can be done independently at home for postpartum mothers.

Keywords: Episiotomy, Laceration, Pain, Perineal

Introduction

The postpartum is a period that requires adaptation of a mother to the presence of a baby, while being in a state of recovery from tissue trauma in the birth canal¹. This transitional situation tends to cause family relationship problems and negative effects such as the feeling experienced after childbirth.

Persistent pain causes irritability effects on the mother, and further leading to self and baby care difficulty, which often has a serious impact, namely postpartum depression^{2,5}. Second-degree perineal lacerations have increased odds of suffering from dyspareunia at several weeks of postpartum⁶, and some other negative effects on quality of life. Therefore, interventions geared towards decreasing pain from perineal lacerations warrant investigation⁷.

The cold treatment carried out by using gel is more efficient in reducing the level of perineal pain, edema, and even bruising that accompany postpartum trauma after an

episiotomy, compared to other methods such as ice packs⁸. Also, several studies stated that this particular demonstrated treatment which involved cold-gel packing, reduces perineal pain disturbance on daily activities in twelve, twenty-four, and forty-eight hours post-delivery. Another one found that satisfaction level increases with discomfort management^{9,10}. Cold-gel pads are very secure because of their gentle texture and suitable temperatures⁹.

Method

In this study, observations of the type of perineal episiotomy laceration in postpartum mothers included lateral, mediolateral, modified median, median, "J" shape, and schuchardt. Perineal pain in postpartum wounds was measured using a numeric rating scale. Furthermore, the differences in the mean score of perineal wound pain based on the types of episiotomy laceration were analyzed using the Kruskal Wallis and Wilcoxon statistical tests.

The cold gel was applied to the perineal wounds of 31 postpartum mothers on the second day after delivery for two consecutive

days during the home care, up to 10 minutes. The subjects were selected by purposive sampling technique based on the following criteria, normal delivery, grade 2 perineal injury, and absence of medical histories such as diabetes mellitus and heart disease. While, the exclusion criteria included, taking antipyretic drugs. Cold gel application was carried out once daily at home, and the pain scale was assessed before and after the process for two days.

Results

This study was conducted on 31 postpartum mothers that had grade 2 perineal injury after episiotomy, with the characteristics in table 1 below:

Table 1.
Demographic and Obstetric Characteristic

Demographic and Obstetric	Characteristic
Age, Mean (SD)	27.42 (5.06)
BirthWeight, Mean (SD)	3.15484 (415.40)
Episiotomy Type n (%)	
Lateral	2 (6.5)
Mediolateral	1 (3.2)
Median Modifications	2 (6.5)
Median	23 (74.2)
"J" Shape	2 (6.5)
Schuchardt	1 (3.2)
Parity, n (%)	
Nullipara	12 (38.7)
Multiparous	19 (61.3)

Based on table 1, the average age of postpartum mothers is 27.42 years, while the mean weight of babies born is 3.15484 kg. The result showed that majority of the types of episiotomy performed at the place of delivery were Median (74.2%), while parity characteristics of the 31 subjects were mostly multiparous (61.3%).

The treatment application was carried out for 2 days in the morning after bathing, followed by compressing the wound area with a cold gel designed in a way that mothers can easily use. Furthermore, this was performed throughout the home care and it encompasses a smart

impact in reducing pain, which is evidenced by pain scale analysis with the Wilcoxon applied math check in the table below.

Table 2
Wilcoxon Test Results on the Perineal Wound Pain Scale with Cold Gel Application

	n	Median ± SD	P-Value
Day-1	31	5.71 ± 1.27 4.39 ± 0.98	0.000
Day-2	31	3.94 ± 0.99 2.13 ± 0.42	0.000

Based on the results of the Wilcoxon test, it was found that there were differences in the mean pain scale from the first and second days after the application of cold gel. In fact, almost all the postpartum mothers experienced a decrease in pain response and no increase was discovered after the application of cold gel. But, 2 of them had constant pain responses on both days.

Furthermore, analysis of the differences in the mothers' perineal wound pain response to the types of episiotomy was carried out using the Kruskal Wallis statistical test which is presented in Table 3 below.

Table 3
Kruskal Wallis Test Results Based on the Types of Episiotomy Against Perineal Wound Pain

Dependent Variable	Chi-square	df	Asymp-Sig
Pain response on the first day before cold gel application	2.90	5	0.715
Pain response on the first day after cold gel application	5.51	5	0.356
Pain response on the second day before	1.35	5	0.929

cold gel application			
Pain response on the second day after cold gel application	2.16	5	0.825

Table 3 shows the overall measurement of pain response. There was no difference for two consecutive days based on the type of episiotomy in postpartum mothers and no further statistical tests were performed.

Discussion

The results shown that the application of cold gel for two consecutive days had an impact on pain reduction. This is evidenced by the reduced pain response measurement values from the first day of application. Moreover, there were no complaints about the discomfort of postpartum mothers during the procedure. Application of cold gel to the wound area for 10 minutes every time by compression and then refuting it using an underwear, also produced good results in reducing the pain response. It has been stated that the perineal temperature reached the recommended analgesia levels after an ice pack application for 10-20 minutes¹¹. The mothers were able to carry out other activities during the application process, hence it is quite practical and economical.

Previous studies also stated that cold therapy is a non-invasive treatment that allows mothers to carry out activities such as breastfeeding¹². This shows that alleviating pain in wound area is necessary for maternal health. Therefore, health professionals need to actively promote ways that can facilitate the expertise of postpartum mothers to manage their pain as this tends to help them regulate relationship with others¹³.

Also, there was no difference found in pain response to the types of episiotomy. This is attributable to the variations in parity and interaction between tissues in the wound area¹⁴. Based on these physiological responses, the orientation of a person about the potential

sensations that follow when using localized cold application is a valuable measure to reduce the associated discomfort, make the cooling experience more tolerable and enhance adherence to the therapy¹⁵.

Owing to a rise in the number of first and second degree tears, the amount of perineal trauma is still higher¹⁶. Therefore, this study was aimed at postpartum mothers with second degree episiotomy laceration, to minimize the traumatic sense of pain that tends to hinder them from carrying out their primary role.

Conclusions

The application of cold gel has an impact on reducing pain and is an economical non-pharmacological method, hence it is important to teach health workers as a self-care method that postpartum mothers can carry out at home.

Acknowledgements

The authors are grateful to Universitas Sumatera Utara research institute for providing assistance in carrying out this study, with the hope that it can become a source of reference and improve the quality of nursing services, especially in postpartum maternal health.

References

1. Schulkin, J., & Powe M. Integrating Evolutionary Biology into Medical Education: for maternal and child healthcare students, clinicians, and scientists. Eds. Oxford University Press; 2019.
2. Eisenach, J. C., Pan, P. H., Smiley, R., Lavand'homme, P., Landau, R., & Houle TT. Severity of acute pain after childbirth, but not type of delivery, predicts persistent pain and postpartum depression. *Pain*. 2008;140(1):87–94.
3. Francisco, A. A., De Oliveira, S. M. J. V., Steen, M., Nobre, M. R. C., & De Souza E V. Ice pack induced perineal analgesia after spontaneous vaginal birth: Randomized controlled trial. *Women and Birth*. 2018;31(5):e334–40.
4. Oliveira, S. M., Silva, F. M., Riesco, M. L., Latorre, M. D. R. D., & Nobre MR.

- Comparison of application times for ice packs used to relieve perineal pain after normal birth: a randomised clinical trial. *J Clin Nurs*. 2012;21(23–24):3382–91.
5. Swenson, C. W., DePorre, J. A., Haefner, J. K., Berger, M. B., & Fenner DE. Postpartum depression screening and pelvic floor symptoms among women referred to a specialty postpartum perineal clinic. *Am J Obstet Gynecol*. 2018;218(3):335-e1.
 6. Signorello, L. B., Harlow, B. L., Chekos, A. K., & Repke JT. Postpartum sexual functioning and its relationship to perineal trauma: a retrospective cohort study of primiparous women. *Am J Obstet Gynecol*. 2001;184(5):881–90.
 7. Swenson, C. W., Low, L. K., Kowalk, K. M., & Fenner DE. Randomized Trial of 3 Techniques of Perineal Skin Closure During Second-Degree Perineal Laceration Repair. *J Midwifery Womens Health*. 2019;64(5):567–77.
 8. Angel Rajakumari. G. Effectiveness of Cooling Gel Pads on Episiotomy Pain Reduction and Promotion of Wound Healing Among Postnatal Mothers. *IJSR - Int J Sci Res*. 2015;4(5):675–6.
 9. Lu, Y. Y., Su, M. L., Gau, M. L., Lin, K. C., & Au HK. The efficacy of cold-gel packing for relieving episiotomy pain—a quasi-randomised control trial. *Contemp Nurse*. 2015;50(1):26–35.
 10. Navvabi, R. S., Kerman, S. F., Saroneh, R. M., & Abedian Z. Cold and reduced episiotomy pain interfere with mood and daily activity. 2011. 87–92 p.
 11. Paiva, C. D. S. B., de Oliveira, S. M. J. V., Francisco, A. A., da Silva, R. L., Mendes, E. D. P. B., & Steen M. Length of perineal pain relief after ice pack application: A quasi-experimental study. *Women and Birth*. 2016;29(2):117–22.
 12. Lucila Coca Leventhal; Sonia Maria Junqueira Vasconcellos de Oliveira; Moacyr Roberto Cuce Nobre; Flora Maria Barbosa da Silva. Perineal Analgesia With an Ice Pack After Spontaneous Vaginal Birth: A Randomized Controlled Trial. *J Midwifery Women's Heal*. 2011;56(2):141–6.
 13. Eshkevari, L., Trout, K. K., & Damore J. Management of postpartum pain. *J Midwifery Womens Health*. 2013;58(6):622–31.
 14. Sheikhan, F., Jahdi, F., Khoie, E., Alizadeh, N., Sheikhan, H., & Haghani H. Episiotomy discomforts relief using cold gel pads in primiparous Iranian women (a comparative study). *Res J Med Sci*. 2011;5(3):150–4.
 15. Starkey C. Therapeutic modalities. FA Davis; 2013.
 16. Abedzadeh-Kalahroudi, M., Talebian, A., Sadat, Z., & Mesdaghinia E. Perineal trauma: incidence and its risk factors. *J Obstet Gynaecol (Lahore)*. 2019;39(2):206–11

THE EFFECTIVENESS OF SESAME OIL FOR THE PREVENTION OF PRESSURE ULCER IN PATIENTS WITH BED REST UNDERGOING HOSPITALIZATION

Chrisyen Damanik¹, Sumiati Sinaga², Kiki Hardiansyah³

^{1,2,3}School of nursing, Institute of Health Technology And Science Wiyata Husada Samarinda, Indonesia
chrisyendamanik@itkeswhs.ac.id

Abstract

Objective: This study aimed to analyze the effectiveness of sesame oil for the prevention of pressure ulcer in patients with bed rest undergoing hospitalization. **Method:** This study used a randomized controlled trial design. The location of this research was Aji Batara Dewa Sakti Samboja Hospital (Indonesia). The sample was selected by consecutive sampling, the number of samples involved in the study was forty samples were divided into control and intervention groups added a light massage (backrub) treatment using sesame oil. This study was analyzed by using Chi Square. **Result:** The results show that there is a significant difference between the two groups ($p=0,04$). **Conclusion:** Skin care with sesame oil can prevent the pressure ulcers. These results recommend that sesame oil can be used for nursing intervention for the prevention of pressure ulcers.

Keywords: Pressure Ulcer, Sesame Oil, Bed Rest, Hospitalization

Introduction

Pressure ulcers (PUs) are caused by tissue damage when the blood supply to an area of skin is diminished as a result of pressure. Although most pressure ulcers are preventable, all patients are at risk¹. Risk assessment should be carried out as soon as possible and within a maximum of 8 hours of the patient being either admitted to hospital or onto a community caseload; this should be repeated as often as required based on patient acuity (National Pressure Ulcer Advisory Panel (NPUAP)).

PUs have become a worldwide concern for health professionals, with the cost burden of managing them and associated complications in excess of £2.1 billion annually². Clinical interventions for PU prevention include holistic assessment, risk assessments and preventive measures³. Nurses have a central role in prevention and management of pressure areas. They should be able to assess patients' risk of developing PUs using evidence-based practice, recognized risk assessment tools and by completing a holistic assessment. Nurses must be able to identify the risk factors

associated with developing PUs and implement appropriate measures to deliver harm-free care. Specifically, nurses can play the most important role in assessing PUs risk factors: when patients are admitted into long-term care facilities, nurses observe the injury-prone area in order to identify the preventive early stage and then implement preventive nursing care^{4,5}.

Pressure ulcers (PUs) prevention remains a significant challenge for nurses⁶. Patients and families know that pressure ulcers are painful and slow to heal. Some risk factors for the development of pressure ulcers/injuries include advanced age, immobility, incontinence, inadequate nutrition and hydration, neuro-sensory deficiency, device-related skin pressure, multiple comorbidities and circulatory abnormalities⁷

The incidence of pressure ulcers in adults varies from 0 to 12% in acute care settings, 24.3 to 53.4% in critical care settings and 1.9 to 59% in elderly care settings⁸. When caregivers practice the best care every time, patients can avoid needless suffer. Pressure

area care is an essential component of nursing practice, with all patients potentially at risk of developing a pressure ulcer⁹ It is nurses' primary responsibility for maintaining skin integrity¹⁰ and prevention of its complications Recognizing patients at risk of developing PU in early time is an essential part of the prevention care pathway¹¹.

Sesame oil (sesame oil) is one of the herbs that have effectiveness as an antioxidant, anti-inflammatory and analgesic. Owned analgesic properties due to the content of lignan found in sesame oil, which is able to inhibit the pain-causing chemical mediators such as prostaglandins¹². Sesame oil is processed from sesame seeds which are very rich in protein, vitamins and minerals. In addition, it has nutrients that contain essential fatty acid compounds, omega 6, omega 9, antioxidants, which function to regulate the balance of the immune system and inhibit the inflammatory process¹³. Referring to this phenomenon, the research objective was to determine the effectiveness of sesame oil for the prevention of pressure ulcer in patients with bed rest undergoing hospitalization.

Method

This study was a randomized controlled clinical trials (RCT). The design used was a parallel design without matching. The location of this research was Aji Batara Agung Dewa Sakti Samboja Hospital in East Kalimantan (Indonesia). This Research was conducted in July to August 2020. The sample was selected by consecutive sampling, the number of samples involved in the study was 40 people, consisting of 20 people the intervention group and 20 control group, with the inclusion criteria: 1) Inpatients who experienced bed rest and willing to become respondents, 2) The risk of pressure ulcer is assessed using the NPUAP scale, 3) Using the standard bed and mattress used in the treatment room 4) Shows negative results for an allergy test and, 5) Not undergoing special treatment for pressure ulcer. The allocation of samples into the intervention group and the control group performed the randomization techniques.

Data collection tool was a questionnaire containing questions related to the characteristics of the respondent containing questions including: age, gender, body mass index, albumin levels, smoking status as well as an observation sheet on the pressure ulcers measure scale using the Press Wound Stadium based on NPUAP 2009.

In this study, the researcher was assisted by a research assistant who was a nurse that served at the Aji Batara Agung Dewa Sakti Samboja Hospital and had passed the inter-rater reliability test which guaranteed the similarity in the perception of the observations between the researcher and the research assistant. As for the technical procedures in the implementation of the research, the following actions were taken: Each sample selected by the researcher, both the control and intervention groups, would be conditioned to receive standard treatment measures in the prevention of pressure sores, namely changing positions every 2 hours, namely tilted left-right and supine. When tilted left and right, the patient was supported by 1 pillow on the head, shoulders, and between the knees so that the ischium and sacrum were lifted 30⁰, and bathed twice a day morning and evening using a washcloth and soap. For the intervention group, the researchers added a light massage (backrub) treatment using sesame oil on the back from the scapula (shoulder) to the ischium and the heel (heel) to Malleolus area 2 times after bathing. The duration of this research and observation was 3 days for each sample person. The basis for the consideration of this study was carried out for 3 days referring to previous studies and referring to the average length of stay of patients who experienced bed rest at Samboja Hospital around 5-8 days of treatment.

Analysis of the data in this study included univariate and bivariate. Univariate analysis described the characteristics of each of the variables studied. Presentation of each variable by using tables and interpretations based on the results obtained. Bivariate analysis was conducted to prove the hypothesis. The

statistical test used for bivariate analysis was Chi Square.

Informed consent was sought from the respondents. The ethical approvals were obtained from Ethics Committee Aji Batara Agung Dewa Sakti Samboja Hospital (Indonesia) with number 445/ 2569/RSABADI/ TU/ VII/ 2020

Results

a. Univariate Analysis

Table 1.

Distribution of respondents based on the characteristics of the respondents at the Aji Batara Agung Dewa Sakti hospital, Samboja. July-August 2020 (n1=n2=20)

Variable	Category	Intervention group (n=20)		Control Group (n=20)	
		f	%	f	%
Age	< 50 years	10	50	12	60
	≥ 50 years	10	50	8	40
Gender	Male	7	35	8	40
	Female	13	65	12	60
Smoking History	Non Smoking	13	65	13	65
	Smoking	7	35	7	35
Albumin Levels	< 3gr/dl	8	40	6	30
	≥ 3 gr/dl	12	60	14	70
Body Mass Index	< 18 kg/m ²	10	50	5	25
	≥ 18 kg/m ²	10	50	15	75

Table 2.

Distribution of Respondents Based on the Incidence of Pressure Ulcers at Aji Batara Dewa Sakti Samboja Hospital, July-August 2020 (n1=n2=20)

Stage of Pressure Ulcers	Group							
	Intervention (n=20)				Control (n=20)			
	Pre Test		Post Test		Pre Test		Post Test	
	f	%	f	%	f	%	f	%

1. No Pressure Ulcers	0	0	16	80	0	0	6	55
2. Stage I	10	50	4	20	10	50	9	30
3. Stage 2	10	50	0	0	10	40	5	15

The table above shows that most of the respondents in the intervention group (80%) experienced a decrease in the degree of pressure sores after the intervention with sesame oil was administered. The results of the homogeneity test for the variable characteristics of the respondents, age, sex, smoking history, albumin levels and body mass index, had an equivalent (homogeneous) variance.

b. The Result of Bivariate Analysis

Table 3.

The difference in the incidence of pressure ulcers between the intervention group and the control group in the Aji Batara Dewa Sakti Samboja Hospital Care Unit (n1=n2=20)

Stage of Pressure Ulcers after Intervention	Group		Total	OR CI	p--value
	Intervention	Control			
No Pressure Ulcers	16 (11)	6 (11)	22	9.333 (2.180-39.962)	0,04
Stage 1+2	4 (9)	14 (9)	18		

Discussion

There is a difference in the incidence of pressure ulcers after the intervention between the intervention group and the control group. The statistical test results obtained p value = 0.04 (p < α = 0.05), it can be concluded that there is a difference in the proportion of the incidence of pressure ulcers between respondents who were given preventive treatment using sesame oil and without using sesame oil. From the results of the analysis, the OR value of 9.333 means that respondents who are not given sesame oil intervention with a combination of 300 oblique beds will have a 9.333 times chance for the incidence of pressure ulcers compared to respondents who are only given a 300 oblique lying position.

Lignans: sesamin, epicesamine and sesamol. Another research result that explains the effectiveness of sesame oil was found by Hirsch et al. (2008)¹⁴, in a study comparing the effectiveness of sesame oil and flomazine ointment in treating superficial burns. Forty respondents were involved in this study, which consisted of two groups. Each group was observed for pain, inflammation and repair of the skin layer. The findings of this study indicate a significant difference between the two groups. In the intervention group that used sesame oil ointment (sesame oil) was significantly effective in preventing pressure sores and reducing the degree of pressure sores, inflammation and repairing the skin layer than the control group.

Conclusion

Skin care with sesame oil can prevent pressure ulcers. These results recommend that sesame oil can be used for nursing intervention for the prevention of pressure ulcers.

Acknowledgement

Acknowledgements to the Ministry of Research, Technology and Higher Education, Directorate General of Research and Development for providing research grants for funding the research in 2020. As well as Aji Batara Dewa Sakti Hospital which has granted research permission during the Covid-19 Pandemic

References

1. Mitchell A. Adult pressure area care: Preventing pressure ulcers. *Br J Nurs*. 2018;
2. Dealey C, Posnett J, Walker A. The cost of pressure ulcers in the United Kingdom. *J Wound Care*. 2012;
3. National institute for health and care excellence. Pressure ulcers: prevention and management. *Your responsibility our responsibility. Pressure ulcer prevention Manag*. 2014;
4. Aydin AK, Karadağ A. Assessment of nurses' knowledge and practice in prevention and management of deep tissue injury and stage I pressure ulcer. *J Wound, Ostomy Cont Nurs*. 2010;
5. Bennett G, Dealey C, Posnett J. The cost of pressure ulcers in the UK. *Age Ageing*. 2004;
6. Leblanc K, Campbell K, Beekman D. Best practice recommendations for the prevention and management of skin tears in aged skin. *Wounds Int*. 2018;
7. Coleman S, Nixon J, Keen J, Wilson L, McGinnis E, Dealey C, et al. A new pressure ulcer conceptual framework. *J Adv Nurs*. 2014;
8. National Pressure Ulcer Advisory Panel European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. *Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Clinical Practice Guideline*. 2014.
9. Stansby G, Avital L, Jones K, Marsden G. Prevention and management of pressure ulcers in primary and secondary care: Summary of NICE guidance. *BMJ (Online)*. 2014.
10. Zaratkiewicz S, Whitney JD, Lowe JR, Taylor S, O'Donnell F, Minton-Foltz P. Development and implementation of a hospital-acquired pressure ulcer incidence tracking system and algorithm. *J Healthc Qual*. 2010;
11. Guy H. Pressure ulcer risk assessment. *Nurs Times*. 2012;
12. Saleem TSM, Basha SD, Mahesh G, Rani PVS, Kumar NS, Chetty CM. Analgesic, Anti-pyretic and Anti-inflammatory Activity of Dietary Sesame Oil in Experimental Animal Models. *Pharmacologia*. 2011;
13. Gauthaman K, Mohamed Saleem TS. Nutritional value of sesame oil. *Pharmacognosy Reviews*. 2009.
14. Hirsch T, Ashkar W, Schumacher O, Steinstraesser L, Ingianni G, Cedidi CC. Moist Exposed Burn Ointment (MEBO) in partial thickness burns. *Eur J Med Res*. 2008;

THE RELATIONSHIP BETWEEN SEX AND STROKE PREVENTION BEHAVIOR TO HYPERTENSION SUFFERER IN WORKING REGION OF JATIBARANG PUBLIC HEALTH CENTER, INDRAMAYU

Dedeh Husnaniyah¹ Titin Hidayatin² Eka Juwita Handayani³

^{1,2,3} School of Nursing, STIKes Indramayu
d_husnaniyah@yahoo.com

Abstract

Objective: One of the complications that often occurs due to hypertension is a stroke. Stroke can be prevented by positive behavior. Sex contributes to a person's behavior. The purpose of this research is to determine the relationship between sex and stroke prevention behavior in hypertension sufferer. **Method:** This research used descriptive with a cross-sectional study. Its samples were taken by doing a purposive sampling technique out of 246 respondents. Its instrument was a questionnaire and its data analysis was bivariate analysis with Chi-square test. **Result:** The results showed that 128 (52%) respondents had good behavior in preventing stroke, 118 (48%) respondents had bad behavior in preventing stroke, those number was taken from as many as 63 (25.6%) male respondents and 183 female respondents. The result between Sex and stroke prevention behavior in patients with hypertension with a *p value* = 0.001 (<0.05). **Conclusion:** There is a relationship between sex and stroke prevention behavior to hypertension sufferers.

Keywords : Hypertension, Sex, Behavior

Introduction

Hypertension is a condition in which a person has an increase in systolic blood pressure, reaching 140 mmHg or more and a diastolic pressure of 90 mmHg or more^(1,2,3,4). Frequent complication due to hypertension is stroke. There are approximately 80% of cases of hemorrhagic strokes that are resulted from hypertension. Stroke sufferers often experience death, disabilities so that they are difficult to do any daily activities such as bathing, walking, moving places^(5,6).

Until now, there is no effective and efficient treatment for stroke sufferers because of its multicausal nature (due to many factors). Some efforts can be done to prevent stroke is to change the hypertension sufferers' lifestyle. Sex is one of the factors of behavior that can contribute to their change.

Based on data taken from the Indramayu District Health Officials, it was found that the highest hypertension cases was around the Jatibarang Public Health Center. There were

638 hypertension sufferers in 2018 with average number as many 53 patients permonth. Based on the description above, the researcher is interested in researching the "Relationship between sex and Stroke Prevention Behavior in Hypertension Sufferers around Jatibarang Public Health Center, Indramayu".

Method

This research is a quantitative research with a descriptive approach. The research design was *cross sectional study*. Its population, were hypertension sufferers who lived in the working area of the Jatibarang Public Health Center, Indramayu. They were able to communicate well and were willing to be respondents. Sampling was done by purposive sampling technique of 246 respondents.

Before conducting the research, the researcher gave informed consent to respondent who were willing to become research subject. After obtaining approval from the respondents, the researcher conducts research by paying attention to the ethics of the research,

including: Right to self determination, Right to privacy, Right to anonymity and confidentiality, Right to fair treatment and Right to protection from discomfort and harm.

Its instrument was sheets of questionnaire. The stroke prevention behavior questionnaire includes: avoiding obesity, preventing stress, avoiding alcohol consumption, quitting smoking, medication adherence, low salt diet, low fat diet, physical activity, fruits and vegetables consumption, and regular health checks. The data analysis was bivariate analysis.

The research was conducted in the working area of Jatibarang Public Health Center from July 21st to August 28th, 2020. Jatibarang Public Health Center covers 8 villages. They are Bulak Lor, Bulak, Jatibarang, Jatibarang Baru, Kebulen, Pilang Sari, Pawidean and Sukalila.

Results

1. Univariate Analysis

Table 1
Sex frequency distribution of hypertension sufferers in the working area of the Jatibarang Public Health Center (n = 246)

Sex	n	%
Male	63	25.6
Female	183	74.4
Total	246	100

Tabel 2
Stroke prevention behavior frequency distribution in hypertensive sufferers in the work area of the Jatibarang Public Health Center (n = 246)

Behavior	n	%
Good	128	52
Bad	118	48
Total	246	100

2. Bivariate Analysis

Table 3
Sex and Stroke Prevention Behavior Frequency Distribution in

Hypertension Sufferers in the Working Area of the Jatibarang Public Health Center (n = 246)

Category	Sex		P Value
	Male N %	Female n %	
Behavior			
Good	21 33.3	107 58.5	0.001
Bad	42 66.7	76 41.5	
Total	63 100	183 246	

Discussion

Based on Table 1, there are more women who suffer from hypertension as much as 183 (74.4%) compared to men. This is due to the influence of female hormones. This fact is appropriate to Rinawang’s research⁷ that women who are female suffer more hypertension than men, especially elder people with hypertension. Postmenopausal women have the same effect on the hypertension. Postmenopausal women experience hormonal changes that cause weight gain and high blood pressure to become more reactive to sodium consumption, and to increase in blood pressure⁸.

Based on Table 2, it was found that out of 246 respondents, it was found that 128 (52%) of respondents had good behavior in preventing stroke and 118 (48%) of respondents had bad behavior in preventing stroke.

Based on Table 3, it is found that out of 246 respondents, it was found that as many as 21 (33.3%) male respondents had good behavior in preventing stroke. A total of 107 (58.5%) female respondents have good behavior in preventing stroke.

Sex has a relationship to stroke prevention behavior in hypertensive sufferers as calculated from *p value* $0.001 < 0.05$. This means that there is a relationship between sex and stroke prevention behavior in hypertensive sufferers.

Conclusion

1. More women suffer from hypertension than men.
2. More good behavior is done by respondents than bad behavior in making efforts to prevent stroke.
3. There is a relationship between sex and stroke prevention behavior in hypertensive sufferers

Acknowledgement

1. Indramayu College Health Sciences
2. Jatibarang Public Health Center

References

1. Black, J. M & Hawks, J. H. (2009). *Keperawatan Medikal Bedah*. Edisi 8 Buku 2. Singapura: PT Salemba Emban Patria.
2. Guyton & Hall (2014). *Keperawatan Medikal Bedah*. Edisi 8 Buku 2. Singapura: PT Salemba Emban Patria.
3. Hanan, NA. (2017). Kriteria baru Tekanan Darah dalam *American Heart Association (AHA)*.
4. Lemone, P., Burke. KM., Bauldoff, G. (2016). *Buku Ajar Keperawatan Medical Bedah*. Jakarta: EGC. Vol 4 edisi 5.
5. Fadlulloh (2014). Hubungan Tingkat Ketergantungan Dalam Pemenuhan Aktivitas Kehidupan Sehari-hari Dengan Harga Diri Penderita Stroke di Poli Klinik Syaraf RSUD Prof. DR. Margono Soekarjo Purwokerto. *Jurnal Keperawatan Sudirman* Vol 9 No. 2.
6. Riskesdas. (2018). Hipertensi. Kementrian Kesehatan Republik Indonesia.
7. Rinawang, F.S. (2011) Faktor-faktor yang berhubunga dengan Hipertensi pada Kelompok Lanjut Usia di Kelurahan Sawah Baru Kecamatan Ciputat, Kota Tangerang Selatan.
<http://Rinawang.LAP.KTI.Pdf//.html>
8. Amila., Sinaga J., dan Sembiring E. (2018) Pencegahan Stroke Berulang Melalui Pemberdayaan Keluarga dan Modifikasi Gaya Hidup. *Jurnal Abdimas Volume 22 Nomor 2*.
9. Pujiastuti, R. D. (2011). *Penyakit Pemicu Stroke*. Yogyakarta : Nuha Medika.
10. Triyanto, E. (2014). *Pelayanan Keperawatan Penderita Hipertensi Secara Terpadu*. Yogyakarta: Graha Ilmu. Cetakan 1.
11. Widyanto, F. C & Triwibowo. (2013). *Trend Disease Trend Penyakit Saat Ini*. Jakarta : TIM.

DETECTION OF MUSCLE STRENGTH SIGNAL WITH PROGRESSIVE MUSCLE RELAXATION EXERCISE BASED ON ARDUINO UNO ON THE ELDERLY IN INDONESIA

Eqlima Elfira¹, Bina Melvia Girsang²
^{1,2} School of Nursing, University Sumatera Utara
eqlima.elfira@usu.ac.id

Abstract

Objective: To identify the muscle strength detection signal with progressive muscle relaxation based on Arduino Uno on the elderly. **Method:** An experimental method with one intervention group on 39 respondents over 45 years of age was used. Furthermore, data analysis was carried out using demographic data and observation sheets based on Arduino UNO connected to a smart phone. **Result:** The results showed that 21 male respondents (53.8%) and 18 female respondents (46.2%) received Arduino UNO-based progressive muscle relaxation training intervention with 30 treatments every day. This exercise was carried out routinely meanwhile, productive activities were given to 21 elderly respondents (53.8%) and unproductive activities to 18 respondents (46.2%). **Conclusion:** Detection of muscle strength with progressive muscle relaxation based on Arduino UNO is identifiable with a sensor value of 5.0/1023.0 volts.

Keywords: Detection, Muscle Strength, Progressive Muscle Relaxation, Exercises, Elderly, Arduino UNO

Introduction

A gradual and continuous process of natural change that begins in early adulthood. Changes with a gradual decrease in bodily functions¹. The number of elderly individuals in the world is estimated to be over 629 million (1 in 10 people are over 60 years old), and to reach 1.2 billion by 2025². The Ministry of Social Affairs stated that the number of elderly people (elderly) in Indonesia is more than 10% of the population in 2020, where the total population in the country reaches 269.9 million people³. Human activities such as eating, drinking, bathing, walking and sleeping are supported by the muscles.

Therefore, they tend to experience problems when activities are not carried out continuously. This is because as the muscle exerts more power, it produces a greater frequency⁴. Developments in this modern era require medical equipment capable of detecting the electrical impulses in human muscles where an analysis of the electromyography signal amplifier circuit will be carried out⁵

detecting the electrical impulses in human muscles where an analysis of the electromyography signal amplifier circuit will be carried out⁵. Research studies related to design Microcontroller Based Electromyograph (EMG) for Detecting Muscle Injuries to the Ankle (Ankle) using components consisting of three electrodes, AD8232, Arduino Uno, and Laptop or PC⁶. The initial processes of muscle stress include polarization (tensed muscles), depolarization (relaxed muscles) and repolarization (resting phase)⁷. Therefore, the stress reaction is read on the Arduino UNO circuit that has been affixed to the muscle skin and the output signal produced will be sent via Bluetooth HC-05 connected to Android with energy through a power bank.

Furthermore, the arduino UNO-based muscle strength detection tool will be linked to muscle signals during progressive muscle relaxation training in the elderly. A method capable of reducing muscle tension by carrying out muscle relaxation exercises and adjusting breathing consistently for 15 minutes was used⁸. In addition, progressive muscle relaxation

techniques are used to reduce fatigue, muscle cramps, neck and back pain⁹.

Method

An experimental method with one intervention group which was carried out on 39 respondents over 45 years of age was used. This method was carried out by designing a system for detecting muscle strength based on Arduino UNO and testing whether the signal will be properly identified. This study was carried out in Medan Sunggal sub-district by involving two set of environments, namely environment II and III.

The design of the system for detecting muscle strength based on Arduino UNO is shown below.

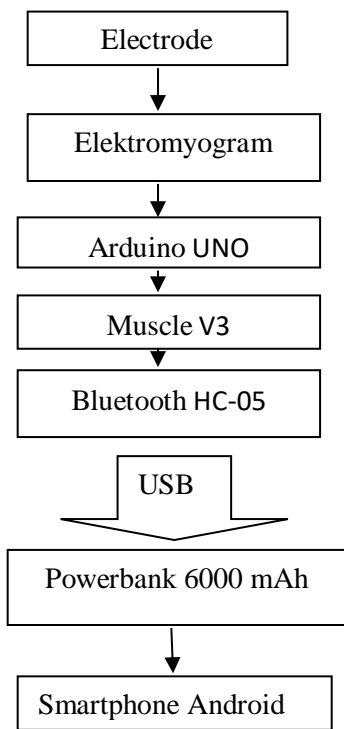


Figure 1. Diagram of Arduino UNO-based Muscle Strength Detection System Design

Results

Table 1

The characteristic of respondents' demographic data was detection of muscle strength in progressive muscle relaxation training based on Arduino Uno in Medan Sunggal, Indonesia.

Demographic data characteristic	n	(%)
Age		
45 – 49 year old	11	(28.2)
50 – 54 year old	7	(17.9)
55 – 59 year old	6	(15.4)
60 – 64 year old	7	(17.9)
Over 65 years old	8	(20.5)
Gender		
Male	21	(53.8)
Female	18	(46.2)
Work Activity		
Elderly	21	(53.8)
Productive	18	(46.2)
Non – Productive		

The majority of the data used comprised of 11 respondents within the age range of 45-49 years (28.2 percent). Furthermore, productive activities such as working were given to 21 respondents (53.8 percent) and the male gender comprised of 21 respondents (53.8 percent) as well.

Table 2

The results of muscle strength detection in progressive muscle relaxation training based on Arduino UNO



This strength detection test generated a signal when carrying out activities and the resulting mean limit of the tool was 5.0/1023.0 volts. Furthermore, the detection of muscle strength consisted of 3 phases namely polarization, depolarization and resting phase, which was seen from the rising, falling and stable signals. However, when a respondent has muscle problems, this detection cannot be read. The mechanism for generating electrical signals in

the muscles is related to the motor unit and the number of unique motor muscles varies from 100 to 1000. In addition, variation of the resulting motor unit varies, depending on the signal being carried¹⁰.

Discussion

Loss of muscle strength with age often results in a decrease in maximal joint torsion and strength, which leads to weakness in the lower limbs. This weakness is not entirely due to loss of muscle mass but 6 - 10 percent is caused by impaired strength and increased muscle mass in the elderly¹¹. Therefore, electromyography was able to analyze motor units, changes in the maximum motor unit rate and strength stability¹². This electrical activity occurs in all parts of the body both in the brain, muscles, and the heart. The frequency of each activity will be different, this can be known by the electrodes placed on the skin. Results of a series experiment EMG The frequency of each movement made by the hand muscles is all different. Function from EMG can be used to determine diseases that exist in the human nervous system and can be used as a control to control the tool. Average amplitude value obtained after going through a series of electromyography (EMG), namely when in 46 a relaxed state is 2.63880 Volt when the hand clenched 2.25289 Volt when the hand opens 1.6381 Volt, right hand open and left hand clenched 1.16864 Volt and when the right-hand clenches and the left hand opens 1.23486 Volt. The hand position when is under the potential will be greater than the hand above so that in this study the amplitude value when relaxed is greater⁴. In study, the biological signal for the condition of the arm muscles using the median frequency method as an identifier of the fatigue signal using the Myo ware muscle sensor to detect signals in the biceps brachi muscle, Arduino UNO as an ADC (analog to digital converter) and serial communication with a laptop. In software, there is a Serial Oscilloscope as a signal viewer resulting from serial communication between Arduino and a laptop and also as a signal recorder, and MATLAB as a signal processor for the recorded frequency spectrum using the

FFT (fast Fourier transform) method, the signal is then searched for the median frequency and displayed on the graph¹³.

Acknowledgements

The author expresses gratitude to the nursing faculty and research institute of the Universitas Sumatera Utara, including the respondents of the Medan Sunggal sub-district.

Conclusion

Arduino uno-based muscle strength detection can be carried out on progressive muscle relaxation exercises with amplitude of 5.0/1023.0 volts.

Acknowledgement

The authors would like to thank the School of Nursing, University Sumatera Utara.

Reference

1. Besdine Rw. Overview Of Aging - Older People's Health Issues - Merck Manuals Consumer Version [Internet]. Merckmanuals. 2017 [Cited 2021 Jan 7]. Available From: <https://www.merckmanuals.com/home/older-people's-health-issues/the-aging-body/overview-of-aging>
2. Ernawati, Syauqy A, Haisah S. Gambaran Kualitas Tidur Dan Gangguan Tidur Pada Lansia Di Panti Sosial Tresna Werdha Budi Luhur Kota Jambi. 2017 [Cited 2020 Sep 5];2(Disitasi 2019 Maret 6):5. Available From: <https://media.neliti.com/media/publications/225415-gambaran-kualitas-hidup-lansia-di-panti-9a7e6b5c.pdf>
3. Suryani Wandari Putri Pertiwi. Tahun Ini, Jumlah Lansia 10,6% Dari Populasi Indonesia [Internet]. Humaniora. 2020 [Cited 2021 Jan 7]. Available From: <https://mediaindonesia.com/humaniora/346598/tahun-ini-jumlah-lansia-106-dari-populasi-indonesia>
4. Rizki Multajam, Mada Sanjaya, Aceng Sambas, Nurul Subkhi Im. Desain Dan Analisis Electromyography (Emg) Serta Aplikasinya Dalam Mendeteksi Sinyal Otot. *Alhazen J Phys.* 2016;Ii(2):601–27.

5. Abyanto Ft, Setiawan Fb. Deteksi Kejenuhan Seluruh Otot Manusia Menggunakan Sensor Emg Berbasis Mikrokontroler Arduino Uno. In 2019 [Cited 2020 Sep 5]. P. 69–74. Available From: <https://Instrument.Itb.Ac.Id/Wp-Content/Uploads/Sites/335/2019/02/12-Deteksi-Kejenuhan-Seluruh-Otot-Manusia-Menggunakan-Sensor-Emg-Berbasis-Mikrokontroler-Arduino-Uno.Pdf>
6. Sulistyawati In, Kholis N. Rancang Bangun Elektromiograf (Emg) Berbasis Mikrokontroler Untuk Mendeteksi Cedera Otot Pada Pergelangan Kaki (Ankle) Ima Noviana Sulistyawati. *J Tek Elektro*. 2018;Viii:557–62.
7. Tyle Yan H.H Lukar Fbs. Deteksi Sinyal Otot Manusia Pada Android Menggunakan Sensor Elektromiografi Berbasis Mikrokontroler Arduino Uno [Internet]. 2018 [Cited 2020 Aug 20]. Available From: [https://Instrument.Itb.Ac.Id/WpContent/Uploads/Sites/335/2019/02/16-Deteksi Sinyal-Otot-Manusia-Pada-jAndroid Menggunakan-Sensor-Elektromiografi-Berbasis-Mikrokontroler-ArduinoUNO.pdf](https://Instrument.Itb.Ac.Id/WpContent/Uploads/Sites/335/2019/02/16-Deteksi-Sinyal-Otot-Manusia-Pada-jAndroid-Menggunakan-Sensor-Elektromiografi-Berbasis-Mikrokontroler-ArduinoUNO.pdf)
8. Elfira E, Nurbaiti N, Tumanggor RD. Effect Of Progressive Muscle Relaxation On The Functional Status Of The Elderly In The Integrated Services Unit Of The Elderly Binjai. *Nurs J Respati Yogyakarta* [Internet]. 2020 May 31 [cited 2020 Sep 5];7(2):126–31. Available from: <http://nursingjurnal.respati.ac.id/index.php/JKRY/index>
9. Hastuti LS. Pengaruh Progressive Muscle Relaxation (PMR) Terhadap Tingkat Stres Pada Ibu-Ibu PKK Usia Dewasa Tengah Di Dusun Ngegot, Selokaton, Gondangrejo, Karanganyar. *J Keterampilan Fis*. 2019;4(2):105–10.
10. Anam K. Mengenal Elektromiografi (EMG) _ KIPMI [Internet]. 2016. 2016 [cited 2020 Sep 6]. Available from: <https://kipmi.or.id/mengenal-elektromiografi-emg.html>
11. Coscrato A, Goncalves M, Zamfolini Hallal C, Ribeiro N. Age-Related Neuromuscular Adjustments Assessed by EMG. In: *Electrodiagnosis in New Frontiers of Clinical Research* [Internet]. InTech; 2013 [cited 2020 Sep 6]. Available from: <http://dx.doi.org/10.5772/55053>
12. Boccia G, Dardanella D, Rosso V, Pizzigalli L, Rainoldi A. The Application of sEMG in Aging: A Mini Review. *Gerontology* [Internet]. 2015 Aug 19 [cited 2020 Sep 6];61(5):477–84. Available from: <https://www.karger.com/Article/FullText/368655>
13. Raharjo AB, Fatukhurrozi B, Nawawi I. Analisis sinyal electromyography (emg) pada otot biceps brachii untuk mendeteksi kelelahan otot dengan metode median frekuensi. *J Electr Eng Comput Inf Technol* [Internet]. 2020 Sep 2 [cited 2021 Jan 7];1(1):1–5. Available from: <https://jurnal.untidar.ac.id/index.php/thetao-mega/article/view/3046/1409>

MENTAL HEALTH PROBLEM RESOLUTION MODEL ON COLLEGE STUDENTS: A LITERATURE REVIEW

Fathra Annis Nauli¹, Sri Wahyuni², Ririn Muthia Zukhra³

^{1,2,3} School of Nursing, Universitas Riau

fathranauli@yahoo.com

Abstract

Objective: The aim of this study is to examine the literature, articles and research documents identifying models for solving mental health problems that occur in college students. **Method:** A literature review searched five electronic databases (Scopus, PubMed Science Direct, CINAHL and Springer Link) using the keywords Completion Model, Mental Health Problem Student AND Recovery Model Anxiety, and College Student Depression. The inclusion criteria for articles are publishing period (2016-2020), can be fully access (full text), and original articles. **Result:** Based on the 14 articles reviewed, it was found that 13 (92.86%) using the student mental health problem solving model were carried out online through the web (57.14%) and (28.58%) online-based therapy and 1 research article used an offline model with counseling method. **Conclusion:** Based on the results of the articles, it was stated that the model for solving mental health problems in college students can be done by online methods, through the web and therapeutic interventions and offline methods with counseling.

Keywords: Resolution Model, Mental Health Problem, Students

Introduction

Being healthy is a good physical, mental and social condition, without disease. Mental health is defined as a condition in which a person is able to cope with stress in life, work productively and successfully, and contribute to his community¹. Based on global research, mental health problems among students are now a major problem in several countries. Mosaic Science's note through the World Economic Forum (WEF) states that the number of students in the UK visiting the campus counseling section has increased by almost five times compared to 10 years ago². In Indonesia, around 78% of students, during their studies, experience mental health problems. 40 percent of it caused the victim also disturbed their academics, and 33.2% were serious as they committed suicide. The suicide of 3 students for 3 months in a college was the tip of the iceberg of mental health problems in higher education³. Approximately 40% of the 18-25 years age group for 2 to 4 years was in a college environment, and most mental disorders begin to appear before this

age, making college an ideal place to identify mental health problems. Therefore, it is necessary to make higher education efforts to overcome mental health problems in students. Based on this description, the writer would conduct a further literature review on the mental health problem solving model in students. The purpose of this literature review is to analyze the results of research related to mental health problem solving models in students. This analysis will be one of the considerations as a model for solving mental health problems in students.

Method

The topic studied in this literature review was a model to solve students' mental health problems. At the screening stage, the researchers searched for data through accessible article-portal websites such as PUBMED and Springer Link using the keywords Completion Model, Mental Health Problem Student AND Recovery Model can

fully be accessed (full text), 4) articles in English and Indonesian, 5) original articles. After the screening stage based on the criteria, a brief summary data analysis was carried out in the form of a table containing the author's name, year of writing, study design, intervention, samples, instruments (measuring instruments), results.

Results

The results of the 14 articles in the literature review were obtained based on the method used in this research article called 10 randomized controlled trial methods, 1 longitudinal study method, 1 Quasy experiment method, 1 prospective cohort study method, and one article did not explain the research design used.

Table 1
The Method Used In This Research Article

No	Research Design	Article amount	Percentage
		N	%
1	Randomized Controlled Trial	10	71.44
2	Study Longitudinal	1	7.14
3	Quasy Experiment	1	7.14
4	Prospective Cohort Study	1	7.14
5.	Without research design explanation	1	7.14
Total		14	100 %

Based on the students' mental health problem solving model, it was divided into 2 models: online (web, application, online therapy) and offline (counseling). There were 8 research articles using the web, 1 research article using applications, 5 research articles using therapy, and 1 research article using counseling.

Table 2
Student's Mental Health Problem Solving Model

No	Student's Mental Health Problem Solving Model	Article amount	Percentage
		N	%
1	Online based (Web)	8	57.14
2	Online based (Application)	1	7.14
3	Online based (Therapy)	4	28.58
4	Offline based (Counseling)	1	7.14
Total		14	100 %

Discussion

Based on the results of 14 articles in the literature review on the research design, they showed that there were 10 articles with a randomized controlled trial research design in research conducted by ⁴. There was 1 research article using the longitudinal study research design in the research article of ⁵, 1 research article using quasy experiment research design in the research of ⁶, as well as 1 article using the research design of a prospective cohort study in ⁷, and one article did not explain the research design used; the research article ⁸. Based on the results of 14 research articles that were reviewed, there were 2 models to solve mental health problems in students; online and offline, of the 14 research articles there were 13 articles used the online model and 1 article used the offline model.

From 8 of the 13 research articles used an online model with the website method, the research of using a website called The Uni Virtual Clinic (UVC) ⁴. By used a website called Personality and Living of University Students (PLUS)⁹. In a research article conducted by website used with the University and Mental Health (UNIVERSAL) program⁷ and using therapy with I-Ai Mental Wellness ⁶. Research article with website-based intervention ¹⁰. There were 3 research articles

using the same website the I care Prevent website^{11,12,13}.

Based on 13 research articles using the online method there were 4 research articles with an online model using online-based therapy method using Acceptance and Commitment Therapy (ACT), and Interventions Based on Cognitive Behavioral Therapy (ICBT)¹⁴. using A Bite of ACT (BOA) therapy¹⁵, using Uni Well Being therapy⁵ and using CBT¹⁶. The results of the review of research articles obtained 1 article using an online model with an application-based method the Care Study application¹⁷.

Based on the results of the literature review using 14 research articles 1 article describing the offline model, in which the offline problem-solving model was divided into 3 methods, the program throughout the campus was called "The landscape" of college mental health: a growing storm consisting of 3 methods: 1). The coordination team approach for post-hospitalized students and other high-risk students, this method used a service called the Intensive Treatment Education Assessment and Management (iTEAM)⁸. The results of the study stated that iTEAM was effective in reducing students in the academic field, 2). Intensive outpatient care in a counseling and health center with the Counseling and Mental Health Center (CMHC) program, the results of the study showed effective results for improving mood and anxiety symptoms and reducing the risk of suicide 3), Special population: athlete care.

The model of giving intervention from 14 research articles was reviewed, it was found that the most widely used model to overcome mental health problems in students was the online model (website, application, online-based therapy). Interventions that were carried out online were more accessible, could be used in person, and usually required less time than face-to-face, cost-effective¹⁸. In line with research¹⁶ stating that digital interventions could increase accessibility and reduce costs, thereby meeting demand on a high scale. In addition, the use of the internet, especially

young people and students, might have a preference for open and simultaneous access to all program access to quickly access the content that was most relevant to them, therefore internet-based interventions were more likely to be implemented and considered more attractive¹⁹.

Based on the three methods (website, application, and online-based therapy) the majority of research articles using the website method were found to be more widely used in research articles; 8 articles used the website method. This was in line with the results of the study¹³ stating that web-based psychological interventions had been developed and studied for their effectiveness in dealing with depression and anxiety problems, the results showed that web-based interventions with therapeutic support were superior to the control group of respondents who undergo conventional therapy.

Conclusion

The following conclusions, in this literature review, identified 14 articles that were reviewed that discussed student mental health problem solving models.

1. The results of the review showed that from the 14 articles that were reviewed, there were 2 models of solving student mental health problems: online and offline. Considered from the number of research articles, using the online model was more dominant than the offline model since online interventions were more accessible, could be used privately, and usually required less time than face-to-face, cost-effective.
2. An online intervention was conducted on 8 research articles using the website method. A web-based psychological intervention had been developed and its effectiveness studied in dealing with depression and anxiety problems, the results showed that web-based intervention with therapeutic support was superior to the control group of respondents who underwent conventional therapy. In addition, online-based interventions with online-based therapy

methods were also found in 4 reviewed research articles.

Acknowledgment

The authors would like to acknowledge the Universitas Riau research office for funding this research.

References

1. World Health Organization (2017). Mental disorders fact sheets. World Health Organization. <http://www.who.int/mediacentre/factsheets/fs396/en/> - [accessed Juni 2020]
2. Theguardian.com.education.2019/mar/05/levels-of-distress-and-illness-among-students-in-uk-alarmingly-high
3. Pikiran rakyat.seni-budaya/pr36568993/fenomena-depresi-dan-bunuh-diri-pada-mahasiswa?page=8 . 2019 [accessed 13 Februari 2020]
4. Farrer, L, M., Guillever, A., Katruss, N., Fassnacht, D, B., Kyrios, M., Batterham, P, J. 2019. A Novel multi- component online intervention to improve the mental health of university students: Randomised controlled trial of the Uni virtual clinic. *Journal Pre-Proof*. Doi: <https://doi.org/10.1016/j.invent.2019.100276>
5. Dear, B, F., Johnson, B., Singh, A., Wilkes, B., Brkic, T., Gupta, R., et al, 2019. Examining an internet- delivered intervention for anxiety and depression when delivered as a part of routine care for university students: A phase IV trial. *Journal of Affective Disorders*. 576-577.
6. Rahmadiana, M., Karyotaki, E., Passchier, J., Cuijpers, P., Balleghooijen, W, V., Wimbarti, S., et al. 2019. Guided internet-based transdiagnostic intervention for Indonesian university students with symptoms of anxiety and depression: A pilot study protocol. *Internet Intervention*. 28-34. <https://doi.org/10.1016/j.invent.2018.11.002>
7. Blasco, M, J., Castelvi, P., Almenara, J., Lagares, C., Roca, M., Sese, et.al. 2016. Predictive models for suicidal thoughts and behaviors among Spanish University students: rationale and methods of the UNIVERSAL (University & mental health) project. *BMC Psychiatry*. 16:122.
8. Morris, M, R., Feldpausch, N, I., Eshelman, M, G, I., & Frankel, B, U, B. 2019. Recovering in place: Creating campus model of care for the high-risk college student. *Current Psychiatry Reports*.
9. Musiat, P., Potterton, R., Gordon, G., Spencer, L., Zeiler, M., Waldherr, et al. 2018. Web- based indicated prevention of common mental disorders in university students in four European countries- study protocol for a randomised controlled trial. *Internet Intervention*. <https://doi.org/10.1016/j.invent.2018.02.004>.
10. Grunzig, S, D., Baumester, H., Bengel, J., Ebert, D., & Kramer, L. 2018. Effectiveness and acceptance of a web- based depression intervention during waiting time for outpatient psychotherapy: study protocol for a randomised controlled trial. *Trials*. 19: 285. <https://doi.org/10.1186/s13063-018-2657-9>.
11. Weisel, K, K., Zarski, A, C., Berger, T., Krieger, E., Schaub, M, P., Moser, C, T., et al. 2019. Efficacy and cost effectiveness of guided and unguided internet-and mobile – based indicated transdiagnostic prevention of depression and anxiety (ICare Prevent): A three –armed randomised controlled trial in four European countries. *Internet Intervention* 51-64. <https://doi.org/10.1016/j.invent.2018.04.002>.
12. Bolinski, F., Kleiboer, A., Karyotaki, E., Bosmans, J, E., Zarski, A, C., Weisel, K, K., Ebert, D, D., et al. 2018. Effectiveness of a transdiagnostic individually tailored internet- based and mobile-support intervention for the indicated prevention of depression and anxiety (ICare Prevent) in dutch college students: study protocol for a randomised controlled trial. *Trials*. 19: 118.
13. Karyotaki, E., Klein, A, M., Riper, H., Wit, L, D., Krijnen, L., Bol, E., et al. 2019. Examining the effectiveness of web-based intervention for symptoms of depression

- and anxiety in college students: study protocol of a randomised controlled trial. *BMJ Open*. doi:10.1136/bmjopen-2018-028739.
14. Becker, T, D., & Torous, J, B. 2019. Recent developments in digital mental health intervention for college and university student. *Curr Treat Options Psych*. DOI 10.1007/s40501-019-00178-8.
 15. Edwards, D, J., Rainey, E., Boukouvala, V., Wells, Y., Bennett, P., Tree, J. et al. 2019. Novel ACT- Based eHealth psychoeducational intervention for students with mental distress: a study protocol for a mixed- methodology pilot trial. *BMJ Open*. doi:10.1136/ bmjopen-2019-029411.
 16. Uwatoko, T., Luo, Y., Sakata, M., Kobayasi, D., Sakagami, Y., Takemoto, K., Collins, L, M., et al. 2018. Healthy campus trial: a multiphase optimization strategy (MOST) fully factorial trial to optimize the smartphone cognitive behavioral therapy (CBT) app for mental health promotion among university students: study protocol for a randomized controlled trial. *Trials*. 19:353. <https://doi.org/10.1186/s13063-018-27-19-z>.
 17. Kahlke, F., Berger, T., Schulz, A., Baumeister, H., Berking, M., Auerbach, R, et, al. 2018. Efficacy of an unguided internet-based self-help intervention for social anxiety disorder in university students: A Randomized controlled trial. *Int J Methods Psychiatr*. <https://doi.org/10.1002/mpr.1766>.
 18. Andersson, G. 2018. Internet interventions: Past, present and future. *Internet Interventions*, 12, 181-188.
 19. Stallman, H. M., Ohan, J. L. & Chiera, B. 2018. Reducing distress in university students: A randomised control trial of two online interventions. *Australian Psychologist*, 1-7.

CORRELATION BETWEEN DIET DIVERSITY AND TODDLER'S NUTRITIONAL STATUS

Ganis Indriati¹, Yufitriana Amir², Yulia Irvani Dewi³
^{1,2,3}Faculty of Nursing, University of Riau, Pekanbaru, Indonesia
ganis.indriati@gmail.com

Abstract

Objective: This study aims to determine correlation between diet diversity and nutritional status in toddler. **Method:** This is a descriptive correlation study with a cross-sectional approach. Furthermore, the samples were mothers who have toddler with total of 77 respondents. Data were collected using diet diversity questionnaire to assess food diversity and anthropometrics for toddler's nutritional status. **Result:** It was found that most respondents are between 17 – 25 years (98.7%), senior high school education (58.5%) and are housewives (71.4%). Furthermore, the toddlers were mostly female (53.2%) aged 12 – 24 months (57.1%). The food diversity they consume was more than 6 groups, hence high category was classified by diet diversity tools for 73 toddlers (94.8%). Also, their nutritional status was in good category by anthropometrics (84.4%). The data analysis results using Somers'd correlation test obtained p value of 0.059 and alpha 0.05. **Conclusion:** In this study, diet diversity was not associated with toddler's nutritional status.

Keywords: Diet Diversity, Nutritional Status, Toddler.

Introduction

Physical growth occurs rapidly during infancy, but slows down at toddlerhood. Children at this stage will experience physical maturation, especially in gastrointestinal system, musculoskeletal, and sensory perceptions, which allows them to experience growth – spurt. However, this does not always happen because some may experience physiological anorexia, which is characterized by decreased appetite and changes in eating habits. Physiological anorexia causes the child to experience nutrition deficiencies, weight loss and stunted growth, even though toddlers actually show an increase in weight (2.5 kg / year) and stable height (12.5 cm / year). Also, toddlers in Ghana exhibit varying amounts of energy requirements¹. The food they consume can be assessed using the Individual Dietary

Diversity Score (IDDS) compiled by Kennedy, G. Ballard, T. MarrieClaude, D². Furthermore, IDDS can be used to assess the variety or food diversity consumed in order to determine nutrients adequacy. Nutrition affects toddler's growth, which can be monitored by the child's

nutritional status. This can be measured using anthropometry based on the ratio of body weight, height and child's age. In addition, toddlers who do not show an increase in weight and height are at risk of growth problems called malnutrition, which can cause stunted growth when not prevented.

Method

This is a descriptive correlative study involving mothers who have toddler aged ≥ 12 – 36 months in Labuh Baru Timur Village, Payung Sekaki District, Pekanbaru. The sample was taken by purposive sampling technique with a size of 77 respondents. Furthermore, this study was conducted for 6 months, from May to October 2020. The questionnaire used was the Individual Dietary Diversity Score (IDDS) to assess toddler's food diversity and anthropometry (weight/age) for nutritional status. In addition, data analysis used Somers'd test to ascertain the correlation between diet diversity and nutritional status.

Results

Data collection was carried out from July to August 2020. This study involved mothers who has toddler, aged $\geq 12 - 36$ months, totaling 77 child.

Table 1.
Distribution of Respondent's Characteristic

Variable	n	%
Mother's Age		
Early Adulthood	76	98.7
Middle Adulthood	1	1.3
Late Adulthood	0	0
Education		
Elementary	1	1.3
Junior High School	10	13
Senior High School	45	58.4
University	21	27.3
Occupation		
Housewife	55	71.4
Government Employees	0	0
General Employees	12	15.6
Entrepreneur	10	13
Toddler's gender		
Boy	36	46.8
Girl	41	53.2
Total	77	100

Table 1. the results found that average respondents aged 17 – 25 years were 76 people (98.7 %) and 55 (71.4%) were housewives, with educational level of Senior High School (58.4 %). In addition, most of the respondent's children were females (41 children 53.2%).

Table 2.
Dietary Diversity and Nutritional Status of Toddler

No	Variable	n	%
1.	Dietary Diversity		
	Low	2	2.6
	Moderate	2	2.6
	High	73	94.8
2.	Nutritional Status		
	Obesity	0	0
	Good nutrition	65	84.4
	Undernutrition	9	11.7

Malnutrition	3	3.9
Total	77	100

The given diet diversity had a high level in 73 children, and 65 toddlers (84.8 %) had good nutritional status.

Table 3
Correlation of diet diversity and nutritional status of toddler

Diet Diversity	Nutritional Status			Total	R	p
	Mal-nutrit ion	Under-nutritio n	Good nutriti on			
Low	0	0	2	2	-0.059	0.059
Moderate	0	0	2	2		
High	3	9	61	73		
Total	3	9	65	77		

Somers'd test found that there was no significant association between dietary diversity and toddler's nutritional status (p value 0.059 ; alpha 0.05), with very weak correlation (r – 0.059).

Discussion

Respondents aged 17 – 25 years, based on Erickson's theory of eight developmental stages in are in the category of early adulthood (young adulthood). This category is characterize by being committed to someone, which is wedding in this case. Meanwhile, individuals in early adult category according to age have developmental tasks, including starting a family, raising children, and managing the home. This supports the findings that many respondents in that age range have toddler-age children and choose to be a housewife who stay at home, as many as 55 people (71.4%). Also, mothers can focus on taking care of their family, raising toddlers, and have more time and attention devoted to the health of their children. Furthermore, they can use their time to increase their knowledge by searching the internet, which provides knowledge without limits on time and distance. Mother can also exchange experiences with family, friends, neighbors or the community. Therefore, even though the respondents (58.4%) have senior high school education, this is not a factor that limits the mother's knowledge of healthy food and diet diversity

which can affect the nutrition status of their toddler.

The respondent's ability to vary the food given to their children depend on their education and knowledge. Both factors can support each other, but education cannot be used as a benchmark for someone's knowledge. Meanwhile, most of the respondent's education in this study was senior high school. Therefore, education is not a challenge to increase their knowledge, which can be obtained from experience, or interaction with others. Knowledge will also increase along with the ability to take advantage of technology, which is growing rapidly. These results are consistent with Solomon, Aderaw and Tegegne³ in Ethiopia, which found that mother's educational and knowledge level, as well as family financial income were positively related to the practice of diet diversity in children aged 6 – 23 months.

The food that respondents gave to their toddlers, showed a high diversity (≥ 6 food group). This means that mothers have been able to provide varied foods more than 6 out of 9 groups determined by the WHO⁴. The group consists of (1) carbohydrates (rice, corn, cereals and tubers) (2) vegetables, tubers, fruits rich in vitamin A, (3) dark green leafy vegetables, (4) vegetables and other fruits, (5) meat and processed product (6) fish and seafood (7) eggs (8) nuts and seeds (9) milk and its product. The nutritional content in the various food groups have benefits for the child's growth.

The nutritional status of toddler in this study was assessed using anthropometry, which was carried out by comparing weight to age (BW/U). The result showed that the majority of toddlers are in the good nutrition category with 65 children (84,4%). Also, a good nutritional status can be represented by achieving weight and height that is appropriate for their age. Weight and height illustrate that there is adequate nutrition from the food consumed. Furthermore, good nutritional status shows that they obtain healthy food in

accordance with WHO. This also shows that mothers are able to meet the nutrient needs for their child's growth. Sometimes, one food contains only one to two macronutrients and micronutrients, while the body needs all of the components. The Food and Nutrition Technical Assistance states that diversity is a source of macro and micronutrients, hence food diversity will ensure nutritional adequacy, which can be observed from the toddler's weight and height.

This study is different from Khamis, Mwanri, Ntwetya and Kreppel⁵ in Tanzania which found that consumption of various foods was associated with reduced undernutrition rates in children aged 6 – 23 months. They then suggested that an assessment of the complementary foods was carried out in order to assess and improve the variety that would meet children's energy needs.

This study did not show a significant correlation between the two variables, which may be due to the absence of direct observation of the food variety provided for children. Meanwhile, research only asked about the food consumed by the children in the last 24 hrs. Another factor which can also influence the results is study location, which includes the city center area, making it easier for family to access food to meet children's nutritional needs. In addition, the data collection process was carried out in one sub-district, in order to maintain physical distancing and prevent the spread of corona virus, hence the obtained data were less varied.

Conclusion

This study did not find significant correlation between diet diversity and nutritional status in toddler

Acknowledgements

The authors would like to thank the Faculty of Nursing, Riau University and Community of mother at East Labuh Baru, Pekanbaru, for their support.

References

1. Bandoh, D.A., Kenu, E. Dietary diversity and nutritional adequacy of under-fives in fishing community in the central region of Ghana. *BMC Nutrition*. 2017;3(2).
2. Kennedy, G. Ballard, T. MarrieClaude, D. *Guidelines for measuring house hold and individual dietary diversity*. FAO. 2013.
3. Solomon, D., Aderaw and Tegegne, T.K. (2017). Minimum dietary diversity and associated factors among children aged 6 – 23 months in Addis Ababa, Ethiopia. *International Journal of Equity in Health*. 2017. 16. (1).
4. World Health Organization. Proposed global targets for maternal, infant and young child nutrition. (series online). 2012. 0.(8). Retrieved on 4th September 2020 from http://www.who.int/nutrition/events/2012_proposed_globaltargets_backgroundpaper.pdf.
5. Khamis, A.G., Mwanri, A.W. Ntwenya, J.E., and Kreppel, K. The influence of dietary diversity on the nutritional status on children between 6 and 23 months of age in Tanzania. *BMC Pediatric*. 2019. 19 (518).

VARIABLES PREDICTING FOR DURATION OF MECHANICAL VENTILATOR ON ICU PATIENTS: RETROSPECTIVE STUDY

Hellena Deli¹, Hetty Yuliana²

^{1,2}Faculty of Nursing, University of Riau, Indonesia
hellenadeli.hd@gmail.com

Abstract

Objective: This study aims the predictor variables for the duration of a ventilator in ICU patients. **Method:** This is a retrospective study design with 36 respondents who were selected by purposive sampling technique. This research data is secondary data obtained from the medical records of patients from January until December 2019. The instrument utilized was the observation sheet to observe the predictor variables for the mechanical ventilator duration. The statistical tests applied were the Spearman correlation test, logistic regression test, and ROC curve. **Result:** Based on the results of logistic regression, it was found that GCS (OR 16.114 (1.537-168.895), p-value 0.020), FiO₂ (OR 0.778 (0.34-17.711), p-value 0.003), MSOFA (0.481 (0.053- 4.331, p-value 0.009), and based on this result found SpO₂ / FiO₂ ratio (OR 26.369 (2.755-252.373), p-value 0.005) is the most influential predictor of ventilator duration. The sensitivity of the SpO₂ / FiO₂ ratio was 42%, specificity of 36.1% (AUC 0.824, p-value 0.001). **Conclusion:** The SpO₂/FiO₂ ratio is the most influential predictor of the duration of ventilator use on ICU patients.

Keywords: Duration of mechanical ventilator, ICU, predictor

Introduction

The use of mechanical ventilators is one of the efforts made to save lives of patients with respiratory failure, but the use of a ventilator for a long time can increase morbidity and mortality. Several factors can lead to prolonged mechanical ventilation.^{1,2,3}

The length of time using a ventilator is an indicator of intensive care services in an intensive room, the use of a mechanical ventilator for a long time can increase health care costs. It is necessary to predict the use of a ventilator on the first day of a patient on a ventilator, several indicators can be used as predictors of ventilator use.⁴ Based on several studies, several variables can be used as predictors of ventilator use are age, PaCO₂, type of disease, and APACHE score.^{5,6,7,8,9}

Prediction of ventilator use is challenging, often subjective, unreliable, and does not allow late decision making.

⁴Besides, until now there is no validated measuring instrument that could assess the various predictor variables of a prolonged mechanical ventilator. This requires nurses and doctors to be able to assess various variables that could predict the use of mechanical ventilators.

Method

This study was a diagnostic study with a retrospective study design to look at variables that could predict the period of time on ventilator use. The number of samples in this study was 36 respondents who were selected by purposive sampling technique that met the inclusion criteria. This research data was secondary data obtained from the medical records of patients treated from January until December 2019. The measuring instrument utilized was the observation sheet to see the characteristics of the respondents, as well as the predictor variables for the length of time on ventilator use. The statistical analysis applied

in this study was the Spearman test to see the relationship of each variable, the logistic regression test to assess the most influential predictor variables, and the specificity and sensitivity tests using the ROC curve.

Results

Based on the results of this study, it was found that the median age of patients admitted to the ICU was 52 years old, whereas the age of patients with the duration of fast ventilator use

was 53 years and the median age of slow ventilator use was 48 years (P-value 0.400). The majority of respondents in this study were female (23 people), 11 female respondents had a prolonged duration of a mechanical ventilator (P-value 0.441). The majority of respondents with a neurosurgical diagnosis (16 people) were 6 respondents with a prolonged duration of a mechanical ventilator (P-value 0.438).

Table 1.

Characteristic of Respondent

Characteristic respondents	N (36)	Fast	Prolonged	P- value
Age (year), Median	52	53	48	0.400
gender (M/F)	13/23	5/12	8/11	0.441
Medical diagnosis				
Neurosurgery	16	9	7	0.438
Cardiovascular Thoracic Surgery	4	2	2	
Surgical Oncology	8	4	4	
Urological Surgery	1	0	1	
Dental and Oral Surgery	1	1	0	
General Surgery	6	1	5	
Oxygen saturation (SpO2) (%), Median	100	100	98	
Blood pressure (mmHg)				
Median Systole	119.5	125	118	0.221
Median Diastole	72	74	71	0.119
Mean Atrial Pressure (MAP) (mmHg), Median	90.67	93	88	0.181
Using vasopressor				
Yes	5	2	3	1000
No	31	15	16	
GCS Median	13	13	12	0.004*
PaO2 (mmHg), Median	124.5	112	127	0.667
FiO2 (%), Median	40	50	40	0.003
Ratio SpO2/FiO2, median	246.25	250	200	0.005
Ratio PaO2/FiO2, median	282.36	297	282	0.153
Score MSOFA	5	4	5	0.009

Significant for P value <0.005

Table 2.
The Variable that Most Influences the Duration of the Mechanical Ventilator

	Variable	Coefficient	<i>p</i>	OR (IK95%)
Step 1	GCS	2.968	0.019	19.456 (1.632-231.952)
	FiO2	-0.251	0.875	0.778(0.34-17.711)
	Ratio SpO2/FiO2	2.980	0.072	19.683(0.768-504.614)
	MSOFA	-0.667	0.579	0.513 (0.49-5.421)
	Constant	-1.895	0.295	0.150
Step 2	GCS	2.980	0.019	19.697 (1.642-236.256)
	Ratio SpO2/FiO2	3.168	0.006	23.756 (2.433-232.006)
	MSOFA	-0.732	0.514	0.481(0.053-4.331)
	Constant	-2.098	0.101	0.123
Step 3	GCS	2.789	0.020	16.114(1.537-168.895)
	Ratio SpO2/FiO2	3.272	0.005	26.369 (2.755-252.373)
	Constant	-2.613	0.14	0.073

Table 3
Sensitivity and Specificity Test

Variable	Cut off Value	Sensitivity	Specificity	AUC	<i>P value</i>
GCS	≥13	22.2%	8.3%	0.723	0.023
FiO2	≤ 40	33.3%	39%	0.797	0.002
Ratio SpO2/FiO2	≥246.25	42%	36.1	0.824	0.001

Discussion

The results showed that age, gender, medical diagnosis, oxygen saturation, blood pressure, MAP value, vasopressor use, PaO₂ levels, and PaO₂ / FiO₂ ratio had no relationship. The results differed from several studies, where some showed age, gender, PaO₂ levels, PaO₂ / FiO₂ ratio, vasopressor use had a relationship to prolonged mechanical ventilation. Differences in results of studies with several previous studies occurred from patient's ICU condition which changeable at any time. These changes could significantly affect the patient's condition, although based on the results of previous studies, this variable affected changes

in this condition could affect prolonged mechanical ventilation.^{8,10,11}

The variables that were predictors of prolonged mechanical ventilation in this study were GCS, FiO₂ value, SpO₂ / FiO₂ ratio, and MSOFA score. This was in line with several previous studies. The GCS value was one of the indicators used in ventilator weaning.^{12,13} Many factors caused prolonged mechanical ventilation, at the time the patient was treated initially, could prevent prolonged mechanical ventilation.⁴ FiO₂ value and SpO₂ / FiO₂ ratio indicated patient's respiratory function. The SpO₂ / FiO₂ ratio indicated organ failure, including lung function failure, influencing the

SOFA score, as well as a predictor of hypoxemia implementation.^{14,15,16} The results of this study also indicated that the SpO₂ / FiO₂ ratio was the variable that most influences the prolonged mechanical ventilator. Hypoxic indicates decreased PaO₂ levels in the arteries. This decrease in oxygen levels in the blood could prevent the patient from being able to do ventilator weaning.

Conclusion

The results showed that the SpO₂ / FiO₂ ratio indicated that the SpO₂ / FiO₂ ratio was the most influential predictor of the duration of ventilator use on ICU patients. The results of the study are expected to be an indicator that can be applied to reduce the use of ventilators.

Acknowledgement

The authors would like to acknowledge the Universitas Riau research office for funding this research.

References

1. Girou E, Schortgen F, Delclaux C, Brun-Buisson C, Blot F, Lefort Y, Lemaire F, Brochard L. Association of noninvasive ventilation with nosocomial infections and survival in critically ill patients. *Jama*. 2000 Nov 8;284(18):2361-7.
2. Esteban A, Anzueto A, Frutos F, Alía I, Brochard L, Stewart TE, Benito S, Epstein SK, Apezteguía C, Nightingale P, Arroliga AC. Characteristics and outcomes in adult patients receiving mechanical ventilation: a 28-day international study. *Jama*. 2002 Jan 16;287(3):345-55.
3. Zilberberg MD, de Wit M, Pirone JR, Shorr AF. Growth in adult prolonged acute mechanical ventilation: implications for healthcare delivery. *Critical care medicine*. 2008 May 1;36(5):1451-5.
4. Ghauri SK, Javaeed A, Mustafa KJ, Khan AS. Predictors of prolonged mechanical ventilation in patients admitted to intensive care units: A systematic review. *International journal of health sciences*. 2019 Nov;13(6):31.
5. Légaré JF, Hirsch GM, Buth KJ, MacDougall C, Sullivan JA. Preoperative prediction of prolonged mechanical ventilation following coronary artery bypass grafting. *European journal of cardio-thoracic surgery*. 2001 Nov 1;20(5):930-6.
6. Estenssoro E, González F, Laffaire E, Canales H, Sáenz G, Reina R, Dubin A. Shock on admission day is the best predictor of prolonged mechanical ventilation in the ICU. *Chest*. 2005 Feb 1;127(2):598-603.
7. Piotto RF, Ferreira FB, Colósimo FC, da Silva GS, de Sousa AG, Braile DM. Independent predictors of prolonged mechanical ventilation after coronary artery bypass surgery. *Brazilian Journal of Cardiovascular Surgery*. 2012 Oct 1;27(4).
8. Sanabria A, Gómez X, Vega V, Domínguez LC, Osorio C. Prediction of prolonged mechanical ventilation for intensive care unit patients: A cohort study. *Colombia Médica*. 2013 Sep;44(3):184-8.
9. Clark PA, Inocencio RC, Lettieri CJ. I-TRACH: Validating A tool for predicting prolonged mechanical ventilation. *Journal of Intensive Care Medicine*. 2018 Oct;33(10):567-73.
10. Cottreau G, Dres M, Avenel A, Fichet J, Jacobs FM, Prat D, Hamzaoui O, Richard C, Antonello M, Sztrymf B. Handgrip strength predicts difficult weaning but not extubation failure in mechanically ventilated subjects. *Respiratory care*. 2015 Aug 1;60(8):1097-104.
11. Muzaffar SN, Gurjar M, Baronia AK, Azim A, Mishra P, Poddar B, Singh RK. Predictors and pattern of weaning and long-term outcome of patients with prolonged mechanical ventilation at an acute intensive care unit in North India. *Revista Brasileira de terapia intensiva*. 2017 Jan;29(1):23.
12. Zhang J, Zhu J, Zhou S, Ma J, Fu H, Song Y, Xu J, Cao L, Dong M, Yan L, Wu X. Noninvasive mechanical ventilation in the weaning of AECOPD patients with respiratory failure: Modified glasgow coma scale score \geq 13 as the switching point. *International Journal Of Clinical*

- And Experimental Medicine. 2019 Jan 1;12(6):7808-13.
13. El-Sarnagawy GN, Hafez AS. Comparison of different scores as predictors of mechanical ventilation in drug overdose patients. Human & Experimental Toxicology. 2017 Jun;36(6):539-46.
 14. Murray JF, Matthay MA, Luce JM, Flick MR. An expanded definition of the adult respiratory distress syndrome. Am Rev Respir Dis. 1988 Sep 1;138(3):720-3.
 15. Marshall JC, Cook DJ, Christou NV, Bernard GR, Sprung CL, Sibbald WJ. Multiple organ dysfunction score: a reliable descriptor of a complex clinical outcome. Critical care medicine. 1995 Oct 1;23(10):1638-52.
 16. Le Gall JR, Lemeshow S, Saulnier F. A new simplified acute physiology score (SAPS II) based on a European/North American multicenter study. Jama. 1993 Dec 22;270(24):2957-63.

THE EFFECT OF SPIRITUAL COUNSELING ON INCREASED ELDERLY SPIRITUALITY

Herlina¹, Agrina²

^{1,2}Nursing Faculty of Riau University
herlina@lecturer.unri.ac.id

Abstract

Objective: Spiritual aspects are important parts of the life of the elderly. The current research aimed to assess the effectiveness of spiritual counseling for elders spirituality. **Method:** The research design used was a quasi-experiment on 34 elderly divided into two groups at a nursing home in Pekanbaru. Questionnaires were asked before and after the spiritual counseling intervention. The data analysis used was the Wilcoxon analysis and the Mann Whitney U-Test. **Result:** The median of elderly spirituality after being given spirituality counseling in the experiment group was 10.00 with a standard deviation of 1.074. The median after without being given spirituality counseling in the control group was 8.00, with a standard deviation of 1.364. The current study result shows an increase in spirituality in the experimental group and that spiritual counseling is an effective method in increasing the elderly spirituality with a p-value of 0.04. **Conclusion:** Spiritual counseling adoption for the elderly is important to increase their spirituality.

Keywords: Spirituality, Spiritual Counseling, Elderly At A Nursing Home

Introduction

The Elderly people over 60 years old, which is the final process of one's life span stages before death¹. Physical changes will lead to a decreased physical condition, such as health problems and the inability to perform a spiritual activity especially praying. These health problems usually disturb elderly praying behaviors. According to a study conducted by²

The elderly with low spirituality and has a low health condition. Another study also found that spirituality and religion affect the elderly's well-being or physical health³.

The spiritual dimension, fact, can teach humans to know the relation between humans and their creator (Allah SWT) (vertical dimension), with others, and human with the environment (horizontal dimension)⁴. Spiritual is everything that regarding one's relationship with a non-material life or a higher power (God) and is also an essential part of one's overall health and well-being^{5,6}. The spiritual aspect can affect the health of the elderly

holistically (thoroughly) and be a bridge in getting closer to God. Mature spirituality will help the elderly face reality, play an active role in life, and formulate the meaning and purpose of life circumstances⁷. According to a researcher⁴, with a strong spiritual life can naturalize and eliminate diseases. Thus, Spiritual life can be provided by providing counseling services to the elderly.

Spiritual counseling is a form of assistance to individuals so that they will have the ability to develop their *fitrah* as a spiritual being (homo religious), behave following religious values (noble sincere), as well as overcome the problems of life through knowledge, beliefs, and practices of religious rituals⁸. According to Yusuf (2007)⁹, suggesting spiritual counseling can be done by giving prayer techniques, scripture references, spiritual experiences, spiritual confrontations, having prayer together between clients and counselors, practicing forgiving impulses, teaching about the use of community or religious groups,

having client prayers, and teaching religious bibliotherapy as well as spiritual concepts.

Preliminary study on the ten elderly in a nursing home in Pekanbaru (PSTW Khusnul Khotimah), most of the elderly did not attend praying activity for some reasons such as physical problems and limited prayer equipment. Spritual counseling has never been done the nursing home. Thus, it can be concluded that it is important to analyze the effectiveness of spiritual counseling for elderly spirituality in PSTW Khusnul Khotimah, Pekanbaru.

Method

The current’s used a quasi-experimental research design with a non-equivalent control group consisting of 34 elderly as the experimental and control group. The sample was determined non-randomly with the incidental sampling technique. This research was conducted at a nursing home, PSTW Khusnul Khotimah that is a government nursing home in Riau. In this study, the exclusion criteria were elderly who did not have mental disorders, could perform the prayer, did not experience hearing loss, more than 60 years old, and did not need special care. The questionnaire asked was regarding the spiritual aspects, including the dimensions of trust, responsibility in life, and self-actualization. The questionnaire has been tested for validity and reliability. The spiritual counseling was carried out for 10-15 minutes every day for one week by the nurses. Both sample groups were subjected to a pretest and post-test to assess the elderly’s spirituality level before and after the counseling. theWilcoxon test and Maan-Whitney U-Test were used to analyze the data to determine the spiritual counseling effectiveness.

Results

Comparison between the elderly spirituality score before and after counseling in experiment and control groups

Table 1
Comparison between the elderly spirituality score before and after counseling in experiment and control groups

Variable	N	Median	SD	P-value
After experiment	17	14.00	4.566	
After control	17	11.00	4.358	0.04

Based on the table 1, The median of elderly spirituality after being given spirituality counseling in the experiment group was 10.00 with a standard deviation of 1.074. The median after without being given spirituality counseling in the control group was 8.00, with a standart deviation of 1.364. Thus statistical test results show that spiritual counseling is effective to improve elderly spirituality

Discussion

Spiritual well-being has several dimensions; cognitive dimension and affection dimension. The cognitive dimension is related to personal satisfaction, while the affection dimension is a person's life experience. Thus, cognitively, when the elderly have received spiritual counseling, they are expected to be able to recall a series of praying activities such as, remembering God, praying five times a day, and reading the Qur'an to remind themself again of the oneness of Allah SWT. Spiritual well-being refers to positive circumstances and feelings, behaviors, and cognition, to interact with others. Moreover, the transcendent dimension means, giving individuals a sense of identity, integrity, satisfaction, beauty, respect, positive attitude, peace and inner harmony, purpose, and life direction¹⁰.

The study results obtained was the elderly spiritual score before spiritual counseling was 10.00 for the experiment group and 11.00 for the control group. The result of the spiritual score after the counseling was 14.00 for the experiment group and 11.00 for the control group. It can be concluded that there is a significant increase in spiritual scores after the respondent got the post-test interventions.

While in the control group that did not get spiritual counseling, there was no increase from 11.00 to 11.00 with a difference of 0.00. then, in the experimental group that got the intervention, there was a change in spiritual score with a difference of 4.00. Thus, there is a meaningful spiritual change in elderly spirituality after the intervention.

The measurement results in the experimental group increased because they had gotten counseling for three days. This is supported by the characteristics of respondents who are Muslim. Counselor carried out spirituality Counseling assisting the elderly to increase their spiritual awareness and overcome the problems they face based on the Qur'an and *sunnah*, so that they can have a positive and functional effect on other aspects of their personal life¹¹. Before that, the counselor convinced himself that there was a connection between spirituality and counseling, by attending recitation and knowing Islamic science better (following liqo').

Spirituality has an important role, but many problems lead to human misinterpretation of spiritual elements, which bring a person stress and a sense of hopelessness. It can be seen from the elderly's level of depression at a nursing home from the results of⁴ Based on their research, from 50 elderly, 38% of them suffer severe depression. In addition, according to¹² at Husnul Khotimah Nursinghome, Pekanbaru, as many as 41% out of 39 elderly have a low spirituality. Other studies also explain a significant relationship between spiritual needs and the quality of the elderly' life in the nursing home in Semarang City since if the elderly' spiritual need are properly fulfilled, they can directly overcome the problems they face and make their quality of life better¹³

Spiritual counseling was carried out by referring to counseling standards. Various stages are carried out, including praying, reading the Qur'an, and fasting¹⁴ explains that one's knowledge will increase when he/she gets clear, directed, and reliable information.

Change and increase in knowledge will lead to awareness, understanding, and, finally, behavior in accordance with the knowledge they have achieved.

Conclusion

Spiritual counseling provision of the elderly is effective in helping them to improve their spirituality. Also, nursing homes should give more attention to this activity to improve elderly spirituality.

Acknowledgement

The authors would like to acknowledge the Universitas Riau research office for funding this research.

References

1. Hurlock, Elisabeth. 2006. *Psikologi Perkembangan Edisi Kelima*. Jakarta : Erlangga
2. Herlina, Agrina. (2018). *Spirituality and health status among elderly people in nursing home Riau Indonesia*. RINC
3. Anggaini, I. (2013). *Hubungan status spiritual lansia dengan gaya hidup lansia*. Skripsi. Skripsi tidak dipublikasikan. Program Studi Ilmu Keperawatan Universitas Riau
4. Stanley, Blair, & Beare. (2005). *Gerontological Nursing : Promoting successful Aging with Older Adulth*. Philadelphia. F.A. Davis Company
5. Taylor,C.R.,Lillis,C.,LeMone,P., dan Lynn,P. (2011). *Fundamentals of nursing : the art and science of nursing care*. Philadelphia : Lippincott Williams & Wilkins Tamami, 2011)
6. Tamami. (2011). *Psikologi Tasawuf*. Cetakan Satu. Bandung ; Pustaka setia.
7. Setyoadi, Noerhamdani and Ermawati. (2011). Perbedaan tingkat kualitas hidup pada wanita lansia di Komunitas dan panti. *Jurnal Keperawatan vol. 2 no. 2* ISSN 2086-3071. Fakultas Ilmu kesehatan. Universitas Muhammadiyah Malang. Diakses pada 20 September 2020:
<http://ejournal.um.ac.id/index.php/keper>

awatan/article/viewFile/621/641_mm_scientific_journal.pdf

8. Syamsu Yusuf L.N. (2009). *Konseling Spiritual Tesisti*. Bandung Rizqi Press
9. Yusuf (2007). *Psikologi Perkembangan*. Bandung. PT Remaja Rosdakarya
10. Velasco-Gonzales., L., & Rioux, L. (2014). The Spiritual well-Being of elderly people: A Study of French Sample. *J Relig Health* 53 DOI10.1007/s10943-013-9710-5, 1123-1137. Tersedia di <https://www.ncbi.nlm.nih.gov/pubmed/23568407>. Diakses pada Tanggal 20 September 2020.
11. Yusuf L.N Syamsu. (2009). *Konseling spiritual teistik*. Rizqi Press : Bandung
12. Destarina, V, Agrina, Irvani Yulia, (2014). Gambaran spiritualitas lansia dip anti sosial tresna werdha khusnul khotimah. *JOM PSIK Vol. 1* No. 2 Oktober 2014.
13. Ummah Athurrita Choirru. (2016). *Hubungan kebutuhan spiritual dengan kualitas hidup pada lansia di Panti Wredha Kota Semarang*. Skripsi
14. Notoatmodjo, Soekidjo. (2010). *Pendidikan Dan Perilaku Kesehatan*. Jakarta: Penerbit Rineka

MENTAL AND EMOTIONAL PROBLEMS IN ADOLESCENTS

¹Jumaini, ²Sri Wahyuni, ³Fathra Annis Nauli

^{1,2,3}School of Nursing, University of Riau

jumna_559@yahoo.co.id

Abstract

Objective: This study aims to describe mental and emotional problems in junior high school (SMP) students. **Method:** This research design is descriptive. Respondents in this study were 182 junior high school students (SMPN 18) in Pekanbaru. Data were collected using the Strength and Difficulties Questionnaire (SDQ) and the Self-Injury Scale. Data analyzed using descriptive analysis. **Result:** A number of 135 respondents (74.2%) showed a normal emotional mentality. On the other hand, 32 students (17.6%) had a borderline disorder, and the other 15 students (8.2%) were abnormal. Furthermore, respondents with self-injurious behavior were 36 students (19.7%), one student (0.05%) had ever attempted suicide, 28 students (15.3%) had suicidal ideation, and none of the students made suicide threats. **Conclusions:** Identifying mental and emotional problems in adolescents is an important thing so that if a problem occurs, it can be treated quickly.

Keywords: Mental, Emotional, Self-Injury Scale, Strength and Difficulties Questionnaire (SDQ)

Introduction

Mental and emotional problems often occur in the adolescent age group, including early adolescents, namely junior high school students. Mental and emotional problems are a condition in which those who experience it feel emotional changes and, if it continues, can develop into a pathological state ¹. Everyone can experience mental and emotional problems during certain conditions during their life cycle, but they can still be cured.

Mental and emotional problems may be related to prolonged stress due to particular situations or several events that occur continuously, genetic factors, brain biochemical imbalances, or a combination of all those factors². Mental and emotional problems can impact oneself and others ³. Those problems can directly or indirectly impact others, such as aggressive behavior, defiance, disobedience, lying, stealing, and loss of self-control. Meanwhile, the impacts on oneself are anxiety, depression, withdrawal from the social environment, eating disorders, and a tendency to injure oneself or even suicide. According to the World Health Organization ⁴, one in five

children aged less than 16 years experiences mental-emotional problems. A total of 104 children out of 1000 children aged 4-15 years experience mental, emotional problems. Moreover, the result is higher in the age group of over 15 years, which is 140 out of 1000 children. The results of a survey by the Report on the Second Australian Child and Adolescent Survey of Mental Health and Wellbeing in Australia in 2015 shows that nearly one in seven children (13.9%) aged 4-17 years had mental health problems. These problems include Attention Deficit Hyperactive Disorder (ADHD) as much as 7.4%, anxiety disorders at 6.9%, and emotional and behavioral disorders at 2.1% ⁵

According to Basic Health Research (Risikesdas)⁶, Indonesia's mental-emotional disorders prevalence mostly happened to the age group of 15 years old and over. The prevalence from 2018 has increased compared to 2013, which rose from 1.7% to 7%, as indicated by anxiety and depression symptoms. Riau Province is in 17th place out of 34 provinces in Indonesia for mental-emotional disorders prevalence, and it has increased compared to 2013, which was from

below 5% to above 10%. In Pekanbaru City, in October 2018, 56 State Junior High School students had cuts on their hands with negative urine test results on drugs and drinks containing hazardous substances. It indicates that the student's mental-emotional behavior was intentional.

Early detected mental-emotional problems are expected to get immediate action to prevent a more serious problem. Mental-emotional problems that are not appropriately resolved will have a negative impact on adolescents' development in the future, especially on their character maturation and will trigger more serious mental health⁷ Mental-emotional problems that are not appropriately handled will negatively affect and cause serious symptoms in adolescents' development⁸.

Research conducted by Mubasyiroh et al. (2017)⁷ on the determinants of emotional-mental symptoms of junior high school students in Indonesia shows that 60.1% of students experienced mental-emotional problems with symptoms of feeling lonely (44.54%), anxiety (40.75%), and suicidal ideation (7.33%). The results of a study by the Indonesian Pediatrician Association (IDAI) (2013) states that around 80% of adolescents aged 11-15 years old, as many as 65% showed smoking behavior, 82% of them had alcohol attempt, misbehavior at school, substance abuse, and anti-social behavior (stealing, fighting, and truancy), and 50% showed high-risk misbehavior such as drunk driving⁹.

Amalia's research (2019) finds that 19 out of 328 grade 7 students of SMPN 13 Surabaya did self-injury. Some of the reasons for this behavior were schoolwork stress, jealousy, parental pressure, and imitating friends who did the same thing to reduce stress. The YouGov Omnibus survey on mental health among Indonesians published in June 2019 shows that more than a third (the equivalent of 36.9 million) Indonesians have intentionally injured themselves¹⁰.

Two junior high school students who had a consultation at the Counseling Unit of the Unri Faculty of Nursing with a self-injury case stated that they started to harm themselves since in junior high school, especially when they feel anxious, stress about academic or school assignments, family condition (parents), relationship with friends, and other matters. The consultation result shows that several mental-emotional problems, both minor and severe, have occurred in individuals since junior high school. Therefore, researchers are interested in conducting research to determine the description of mental-emotional problems in junior high school students in Pekanbaru City.

Method

This study used a quantitative descriptive design with 182 respondents from junior high school (SMPN) 18 Pekanbaru. Data were collected using the Strength and Difficulties Questionnaire (SDQ) and Self-Injury Scale, which were given to respondents via the Google Forms' link for univariate data analysis (frequency and percentage).

Results

Table 1
Respondent Characteristics

No	Respondent Characteristics	n	%
1.	Age		
	a. Early adolescence (10-13 years old)	101	55.5
	b. Middle youth adolescence (14-17 years old)	81	44.5
2.	Gender	60	33
	a. Male	122	67
	b. Female		
3.	Grade	73	40.1
	a. Grade 7	41	22.5
	b. Grade 8	68	37.4
	c. Grade 9		
	Total	182	100

Table 2
Respondents' mental-emotional problems

No	Mental-emotional problems	n	%
1	Normal	135	74.2
2	Borderline disorder	32	17.6
3	Abnormal	15	8.2
	Total	182	100

Tabel 3
Respondents' self-injury dimensions

Dimensions	Yes		No		Total	
	n	%	N	%	n	%
self-injury behavior	36	19.8	146	80,2	182	100
suicidal attempts	1	0.1	181	99.4	182	100
suicide threats	0	0	182	100	182	100
suicidal ideation	28	15.4	154	84.6	182	100

Discussion

There are real physical and hormonal changes in early adolescence, and adolescents still find it difficult to adjust to these changes. As a result, adolescents tend to be alone, so they feel isolated because emotional development makes them very sensitive and reactive towards various social events or situations ¹¹. The ability of adolescents to control emotions is influenced by their environment's socio-emotional conditions, especially the environment they live in and the environment of their peers ⁹.

Symptoms of emotional problems in the Strength and Difficulties Questionnaire (SDQ) are almost the same as depression symptoms, which include somatic symptoms, anxiety, unhappiness, and lack of confidence ⁷. In this study, as much as 8.2% of respondents with mental-emotional problems are in the abnormal category. Symptoms of mental-emotional problems with abnormal behavior are also one of the severe and long-term mental-emotional disorders. The symptoms of those mental-emotional disorders are such as depression, suicidal thoughts, hyperactivity, learning disorders, difficulty in concentrating,

anxiety disorders, tic disorders (movement disorders), and behavior disorders (dropping out of school, like starting a fight, stealing, lying, and being aggressive) ¹².

Based on the current study results, 19.78% of respondents took self-injury to cope with the problems at hand. Self-injury is a form of individual behavior to deal with emotional stress or emotional pain by hurting and harming oneself without intending to commit suicide¹³. A person with suicidal intent is likely to commit suicide after several self-injury episodes ¹⁴. Moreover, unfortunately, it is known that 15.38% of the respondents in the current study had ever had suicidal ideas.

Conclusion

The results show that respondents who experienced mental-emotional problems with borderline and abnormal behavior were 17.6% and 8.2%, respectively. In addition, there were quite a number of respondents who had self-injury behavior (19.78%) to cope with their problems and 15.38% of respondents who have other mental-emotional behaviors in the form of suicidal attempts and suicide ideation. Early detection of mental-emotional problems in adolescents is important so that immediate actions to prevent further problems can be carried out earlier.

Acknowledgments

Hopefully, the school will monitor the students' behavior so that students who show mental and emotional problems can be detected and given appropriate action. Students in a state of stress and experiencing mental and emotional problems can meet and consult with counseling teachers at school or convey their family, parents, or friends.

References

1. Kementrian Kesehatan. Riset Kesehatan Dasar (RISKESDAS) 2013. Laporan Nasional 2013.
2. Stuart GW. Principles and Practice of Psychiatric Nursing. 10th ed. Mosby; 2013.
3. Wibowo, D. P., & Jusuf I. Perbandingan Tingkat Depresi antara Mahasiswa Perokok

- dengan Mahasiswa Non-Perokok (Doctoral dissertation, Diponegoro University). 2013;
4. World Health Organization (WHO). World Population Mentoring Adolescent and Youth. Department of Economic and Social Affairs of the United Nations. New York, United Nations Publications. 2012;
 5. Lawrence, D., Johnson, S., Hafekost, J., Boterhoven de Haan, K., Sawyer, M., Ainley, J., & Zubrick SR. The mental health of children and adolescents: Report on the second Australian child and adolescent survey of mental health and wellbeing. 2015.
 6. Kementerian Kesehatan Republik Indonesia. Basic Health Research 2018. Riskesdas 2018.
 7. Mubasyiroh, R., Putri, I. Y. S., & Tjandrarini DH. Determinan gejala mental emosional pelajar SMP-SMA di Indonesia Tahun 2015. *Bul Penelit Kesehat.* 2017;45(2):103–12.
 8. Putri WH, D., Hartanto, F., & Hendrianingtyas M. Hubungan durasi dan frekuensi bermain video game dengan masalah mental emosional pada siswa SMPN 3 Semarang. Ungraduated thesis, Fac Med Diponegoro Univ. 2014.
 9. Ikatan Dokter Anak Indonesia. Masalah kesehatan mental emosional remaja. Diperoleh tanggal 25 Oktober 2019 dari <http://www.idai.or.id>. 2013.
 10. Amalia. Bimbingan Konseling Islam menggunakan Teknik Rational Emotive Behaviour Therapy dalam Mengatasi Self Injury (Melukai Diri) pada Siswi Kelas 7 di SMPN 13 Surabaya. UIN Sunan Ampel Surabaya. 2019;
 11. Hurlock, E B. Psikologi Perkembangan Suatu Pendekatan Sepanjang Rentang Kehidupan. Edisi ke-lima. Jakarta: Erlangga; 2016.
 12. Idaiani S. Analysis of Mental Emotional disorder Symptoms in Indonesian People. *Journal Indonesia Medical Association.* 2015.
 13. Glenn, C. R., & Klonsky ED. Nonsuicidal Self-Injury Disorder: An Empirical Investigation in Adolescent Psychiatric Patients. *Journal Clinical Children Adolescent Psychology.* 2013;42(4):496–507.
 14. Chan, Melissa, Bhatti, Henna, Meader, & Nicholas et al. Predicting Suicide Following Self-Harm: A Systematic Review of Risk Factors and Risk Scale. 2016;277–83.

KNOWLEDGE AND PREVENTION OF COVID-19 BY AIRCRAFT PASSENGERS IN RIAU PROVINCE

Lius Parna¹, Nila Kusumawati², Putri Eka Sudiarti³, Alini⁴
^{1,2,3,4} School of Nursing, University of Pahlawan Tuanku Tambusai
putriekasugiarti@gmail.com

Objective: This study is aimed to find out the knowledge of aircraft passengers and the preventive measures taken by airplane passengers when traveling internationally during the COVID-19 period. **Method:** The research method used is a qualitative method with a narrative descriptive technique. The respondents are airplane passengers who had traveled abroad between January and March, 2020. Technique sampling of this study is snowball sampling. The respondents in the study amounted to 10 people. The technique of collecting data was through interviews using an audio recorder. Data analysis used is thematic analysis. **Result:** The result shows that there were several themes of aircraft passenger knowledge, namely definitions, signs of symptoms, transmission, and preventing COVID-19. The efforts to prevent COVID-19 carried out by aircraft passengers include using masks, hand sanitizers, doing physical distancing, and washing hands. **Conclusion:** The conclusion of this study knowledge possessed by airplane passengers regarding COVID-19 is still inadequate so it is hoped that the government will be more responsive in responding to COVID-19.

Keywords: Knowledge, Aircraft Passengers, Prevention Efforts, COVID-19.

Introduction

The World Health Organization (WHO) has declared that COVID-19 is a pandemic or a global epidemic. COVID-19 is a large family of viruses that cause diseases ranging from mild to severe symptoms. COVID-19 is a new type that has never been previously identified in humans. COVID-19 is large, 400-500 micro in diameter. COVID-19 does not float in the air but attaches to objects or limbs. COVID-19 is transmitted through droplets or saliva particles when a person sneezes or coughs¹.

As of April 27, 2020, 210 countries in the world have tested positive for COVID-19 with total of 3.056.787 million cases. In April 2020, the United States had become the country with the highest number of COVID-19 cases, amounting to 560.433 million people, followed by Spain with 1.005.808 million cases². On April 27, 2020, the number of positive cases of COVID-19 reached 9.009 cases, and the number of deaths was 765. Around 13 positive cases of COVID-19 were recorded as imported cases or those with a history of travel to countries affected by COVID-19³.

Riau Province is one of the provinces in Indonesia that has been affected by the COVID-19 outbreak. Since April 27, 2020, around 14.071 thousand residents in Riau Province have become people under surveillance (ODP) and 251 patients under surveillance (PDP). The 251 PDPs, 39 people tested positive for COVID-19. Although the number of ODP and PDP in Riau Province continues to increase until the beginning of April 2020. Local governments still have not implemented an area and airport lockdown system as has been done by many countries in the world to break the chain of the spread of COVID-19 in Riau Province⁴.

The airport is one of the places where COVID-19 is transmitted because it operates to serve a number of flights. Sultan Syarif Qasim II Airport in Riau Province is still running flight routes from and to Malaysia and Singapore and other countries⁵. Aircraft are also known to be one of the causes of the rapid spread of COVID-19. This happens because of the interaction between passengers on the plane. In

one flight cabin crew and airplane passengers will get out of the airplane seat to use the toilet. If a passenger or one of the cabin crew on the flight is infected with COVID-19 and walks to the toilet alternately, it can spread the virus to the people they are traveling through or when they take turns using the same toilet⁶.

When COVID-19 started affecting several countries, the outbreak had not yet spread to Indonesia. Indonesian people still travel internationally. In order to avoid infectious diseases and not pass them on to other people, one must know about these diseases and their prevention. The attitude of the people who do not care about this disease outbreak and do not think they will be infected by this disease also causes them to still travel internationally⁷. This study aims to determine the knowledge of aircraft passengers and the preventive measures taken by airplane passengers when traveling internationally during the COVID-19 period.

Method

This research used qualitative methods with a descriptive narrative approach. Respondents in this study were airplane passengers who had traveled abroad in January-March 2020. The inclusion criteria in the study sample were conscious passengers who had traveled abroad between January-March 2020, capable aircraft passengers. The participants were those who could communicate and were willing to be respondents. The sample technique used was snowball sampling. Respondents in the study amounted to 10 people. The data were collected through semi structured phone interviews for 30-45 minutes / interviewed respondents. Data analysis technique used was thematic analysis consisting of coding, data classification, categories, making research reports in draft form and validating the data.

Results

A. Aircraft Passenger Knowledge

1. Definition of COVID-19

Six out of ten respondents said that COVID-19 is a disease that was easily transmitted and originates from Wuhan,

this is as stated by respondents (Es-20-Japan), (Yyn-58-Malaysia) namely "As far as COVID-19 is concerned a virus that can be transmitted and easily spreads through the air. "COVID-19 is a corona, right? The virus that came from China, if I'm not mistaken,".

2. Signs and symptoms

All respondents said that the symptoms of COVID-19 were cough, fever, flu and shortness of breath as revealed by several respondents (Ypl-20-Malaysia), (Kl-24-Malaysia), (Es-20-Japan), namely "His body temperature rises, shortness of breath, the flu anyway."

3. Mode of transmission

Seven out of ten respondents said that the mode of transmission of COVID-19 is through droplets or droplets when someone is talking or coughing and sneezing, this was similar. With what was expressed by respondents (Nk-37 Malaysia and the Philippines) "" Ehh, the transmission is through droplets, for example coughing or sneezing, then the droplets contain the virus so that they are inhaled by other people and through objects in other public facilities

4. How to prevent

All respondents said that the prevention method used was to use a mask and some respondents washed their hands and kept their distance from each other, as stated by the respondent, namely (Ad-22-Malaysia) "" Emm, if your personal preference is to wear masks everywhere , diligently wash your hands once an hour, bring a tissue and a hand sanitizer

B. Preventive Measures by Aircraft Passengers

1. Masks

All respondents said that the preventive efforts they took while traveling internationally were only using masks as expressed by several respondents, namely (Es-20-Japan) "" Just wear a mask from home to the airport and on the plane you also have to wear a mask too " and (Na-33-Thailand) "" Just wear a mask "

2. Wash hands
Some respondents said that prevention efforts were only using masks and washing hands, as expressed by several respondents, namely (Er-22-Malaysia) "The effort is to wash your hands frequently, continue to wear masks".
3. Physical distancing
Only two respondents said that the preventive efforts they took during international travel were wearing masks, washing hands and physical distancing as revealed by the following respondent (Sn-40-Malaysia). My Chinese people stayed away from their crowd at that time, the news was originally from China, I was looking for the back seat before boarding, I stayed away from them."
4. Hand Sanitizer
Two respondents said that the efforts they made to prevent COVID-19 while traveling internationally were only using masks and carrying hand sanitizers, washing hands as expressed by respondent (Ad-22-Malaysia), namely " Emm, if you prefer to personally, definitely wear a mask everywhere, diligently wash your hands, bring hand sanitizers.

Discussion

A. Aircraft Passenger Knowledge

From the results of the study, most respondents said that COVID-19 is a disease that is easily transmitted and originated from Wuhan China, this is in accordance with the definition of COVID-19 issued by WHO. The level of knowledge assessed to be able to determine a person's health status, this study was in accordance with the theory put forward. Knowledge, attitudes, and values were factors that determine a person's health status and experience or knowledge that a person has a factor that plays a major role in interpreting stimulus obtained¹⁰.

From the research results, it was found that most respondents knew the signs and

symptoms of COVID-19, namely fever, dry cough and difficulty breathing. Only a small proportion of respondents could not correctly say the signs and symptoms of COVID-19 according to what has been issued by WHO. If someone has or knows a condition (signs and symptoms) this should be a benchmark for someone to do something. This study showed that the presence of symptoms was a response from the body of a living being as an abnormal body condition due to certain reasons¹⁰.

B. Aircraft Passenger Prevention Measures

From the results of the study, it was found that all respondents who only wore masks as a preventive measure and three respondents who wore masks, hand sanitizers, carried out hand washing and physical distancing as efforts they made to prevent COVID-19 while traveling internationally. Although public awareness and knowledge was high about health, the practice of health or healthy life behavior in society was still very low¹⁰

Conclusion

The knowledge possessed by airplane passengers regarding COVID-19 was still inadequate so it is hoped that the government will be more responsive in responding to COVID-19 when COVID-19 has just emerged in Indonesia.

Acknowledgements

This study would like to express our deepest gratitude to the Riau Kasim Syarif Airport, all respondents and parties involved in this research.

References

1. WHO. (2020). *Report situasional COVID-19*. Diakses tanggal 11 maret- 15 april 2020.
2. Worldometer. (2020). *Corona virus pandemic*. Diakses tanggal 12 maret- 17 april 2020.
3. Kemenkes RI, (2020). *Gugus tugas percepatan penanganan COVID-19*. Diakses tanggal 17 maret- 05 april 2020.

4. Depkes Provinsi Riau, (2020). *Informasi COVID-19*. Diakses tanggal 24 maret- 05 april 2020.
5. Kompas, (2020). *Berita terupdate COVID-19*. Diakses 13 maret 2020.
6. Kompas, (2020). *Cara tetap waspada tetapi tidak panik di tengah wabah COVID-19*. Diakses 17 april 2020.
7. CNN.indonesia, (2020). *Gaya hidup melawan COVID-19*. Diakses tanggal 13 maret 2020.
8. CNN.indonesia, (2020). *Ratusan Ribu Kasus COVID-19 RI Tak Terdeteksi*. Diakses tanggal 27 maret 2020.
9. CNN.indonesia, (2020). *Resiko Corona Dianggap Rendah, Orang Tetap Bandel Keluar Rumah*. Diakses tanggal 17 april 2020.
10. Notoatmodjo (2010). *Ilmu perilaku kesehatan*. Penerbit Rineka Cipta : jakarta.

EDUCATION-BASED INTERVENTION ON FEEDING PRACTICES OF MOTHERS WITH STUNTED CHILDREN AT AGE 6-24 MONTHS

Maria Susana Ine Nona Ringgi¹, Yosephina Maria Hawa Keytimu²

Faculty of Healthy Sciences, Nusa Nipa University
mariainena@gmail.com

Abstract

Objective: Stunting increases in Indonesia because the practice of complementary feeding has not met the UNICEF program standards. Nutrition education is one of recommendations to overcome mothers' feeding practice. This study aims to influence the educational-based interventions on maternal eating practices in Paga Village. **Method:** This study was quasi-experimental research designed with one pre-test and post-test group, and without control group. The sample of this study involved 45 respondents selected by a total sampling technique. The feeding practices were measured through a questionnaire. The intervention was given for three times. The data were analyzed by employing paired sample t-test. **Result:** There is an effect of education-based intervention interventions on the feeding practice of companion breast milk (P 0.00; T-5.223). Changes in better feeding practice occurs by fulfilling points of feeding practice program. **Conclusion:** This intervention can be an alternative for health workers to continue promote and for the mothers to apply feeding practice programs.

Keywords: Education-Based Intervention, Feeding Practice

Introduction

Complementary food with breastfeeding refers to nutritious food and beverages given to infants or children aged 6-24 months to meet nutritional needs other than breast milk. Companion breast milk is food given to babies aged 6 months or more because breast milk no longer meets the baby's nutritional needs.

According to the World Health Organization (WHO), complementary food should be given after the child is 6 months old and this feeding continues until 24 months because during that period the production of breast milk (breast milk) decreases. Consequently, the nutrition supply from breast milk no longer meets the child's increasing nutritional needs. In particular, it is explained that knowledge and practice are the main obstacles for mothers with lack of understanding in complementary

feeding¹. Nutritional intake in children aged less than five months is very important to support the baby's growth according to the growth chart.

Therefore, growth faltering that can cause stunting does not occur. In 2017, 43.2% of Indonesian children under five experienced an energy deficit; while 28.5% experienced a mild deficit. Meanwhile, the cases of protein adequacy indicate that 31.9% of children under five had a protein deficit, and 14.5% had a mild deficit. The 2018 basic health research report shows that the nutritional status of stunted children in Indonesia reached 17% in 2018. Meanwhile, the proportion of children under five with stunting in the provincial level shows that the highest case occurred in Nusa Tenggara Timur by reaching 29.5%. This condition urgently requires attention.

A study by Unicef Indonesia proposes various obstacles causing the high incidence of stunted children aged 3-5 years in Indonesia. Nutrition education is a part of health education activities, and is defined as a planned effort to change the behavior of individuals, families, groups, and communities in the health sector. It is expected that the provision of educational interventions on nutrition can increase mothers' knowledge and feeding practices of

complementary foods; as a result, the mothers can provide nutritious food and the children can meet their nutrition needs with the quality and quantity of complementary foods of breast milk program². Nutrition education for mothers is one of the recommendations of Unicef Indonesia to alleviate stunting in Indonesia. Nutrition education can be conducted individually or in groups³.

Based on this background, the researchers are interested in examining the effects of providing education-based interventions on the feeding practice of complementary foods of breast milk program by mothers to improve stunted children's nutrition in Paga village, Paga sub-district, Sikka district. Thus, this research is expected to be a reference and consideration to determine policies related to nutrition issues, especially for stunted children.

Method

This study employed a quasi-experimental research design with a one pre-test and post-test group. The design of this study only conducted intervention in one group without comparison. The effectiveness of the treatment was assessed by comparing the pre-test and post-test scores. Respondents of this study were 45 mothers with stunted children. The samples were selected through a total sampling technique.

Results

This research employed a quantitative research method with a quasi-experimental research design, one pre-test and post-test group, and without control group. The effectiveness of the treatment was assessed by comparing the pre-test and post-test scores. This study involved 45 respondents. The data analysis reveals the following results.

Table 1
The Effects of Education-Based Interventions on Feeding Practice of Companion Breast Milk.

Feeding Practice	Mean ± SD	P value
Feeding practice (pre-test)	37.73± 11.46	0.000
Feeding practice (post-test)	43.04± 12.07	
t count: 5.223		
t table: 1.680		

The results obtain t value $-5.223 >$ from t table -1.680 with sig 0.000 in which these numbers are less than the limit of 0.05 research error. These results indicate the provision of education-based interventions has a strong influence on mothers' feeding practice as the companion of breast milk. Meanwhile, the mean value of pre-test and post-test shows that positivity of the post-test is much higher than that of the pre-test. This shows that the provision of education-based interventions has a positive impact because it can change the mother's behavior with better companion breast milk feeding. Meanwhile, the mean values of pre-test and post-test show that positivity of the post-test is much higher than the pre-test. This shows that the provision of education-based interventions has a positive impact because it can change the mother's behavior with better companion breast milk feeding. This intervention can be an alternative to overcome the stunting in children under five in Sikka Regency, especially in Paga Village.

Discussion

This study reveals that there is a difference in the proportion of knowledge after the intervention. This difference in proportion indicates that the intervention brings effects and increases the mothers' practices of offering complementary breast milk. This hypothesis is proved through the T test, and the test obtains a value of $-5.223 >$ from table -1.680 with a number of 0.000 which is smaller than the 0.05 limit of research error. These results indicate that the education-based interventions bring strong influence on the practice of mothers 'offering complementary

breast milk. Meanwhile, the mean value of the pre-test and post-test shows that the positive ranking of the post-test is much higher than that of the pre-test. This shows that education-based intervention is positive because it can change the mothers' behavior to provide better complementary breastfeeding. The results of this study are in line with those who state that there is a significant difference between the pre-intervention and the practice intervention of mother's offering food to stunted toddlers⁴. Meanwhile, states that education affects the mothers' feeding practice⁵. In contrast, a study explains that mother's knowledge has no effect on feeding practices. This result is derived from mother's knowledge as well as by social culture in offering eating practices⁶. Therefore, if mothers want to change feeding practice, they can do it by increasing their knowledge through education-based interventions and paying attention to other aspects, such as social culture.

Conclusion

Education-based interventions have an effect on companion breast milk feeding practices. This intervention can be an alternative for health workers to continue promote and for the mothers to apply feeding practice programs.

Acknowledgement

The writers would like to thank to several parties who the conduction and publication of this research. They are:

1. PDDIKTI as the research grant service institute for beginner lecturer competition;
2. Nusa Nipa University that has fully supported the conduction of this research;
3. Research respondents who participated in and involved as research samples;
4. UNRI that held a conference and facilitated the publication of this research; and
5. Ode Irman, Yohanes Paulus Pati Rangga, and Anggia R. Wijayanti who analyzed the data.

References

1. WHO. Global Strategy for infant and young child feeding. 2016.
2. Ogbo FA, Page A, Idoko J, Claudio F AK. Trends in Complementary feeding indicators in Nigeria 2003-2013. *BMJ Open* 2015. 2015;5 (10)-e00, doi: 10.1136/bmjopen-2015-008467.
3. Kemenkes RI. Peraturan Menteri Kesehatan Nomor 51 tahun 2016 tentang Standar Suplemen Gizi. Jakarta; 2016.
4. Dewi M dan AM. Pengaruh Edukasi Gizi terhadap Feeding Practice Ibu Balita Stunting Usia 6-24 Bulan. *Indones J Hum Nustring*. 2016;Vol. 3. No, doi: DOI:10.21776/ub.ijhn.2016.003. Suplemen.
5. Tigist Kassa, Berhan Meshesha JE. Appropriate Complementary feeding practice and associated factors among mothers of children age 6-23 months in Southern Ethiopia. *BMC Public Heal*. 2015;2013;13:10, doi: DOI: 10.1186/s12887-016-0675-x.
6. Sanusi R.A, Leshi O.O AUN. Mother's Knowledge and Practice OF Breastfeeding and Complementary feeding in Enugu Staet Nigeria. *J Res Nurs Midwifery*. 2015;201;5:021-, doi: DOI:10.14303/JNRM.2015.0127.

THE EFFECT OF PROGRESSIVE MUSCLE RELAXATION AND QUR'AN MUROTTAL TO OLDER PEOPLE HYPERTENSION

Pera Putra Bungsu¹ Dewi Kurniawati²

^{1,2}School Of Nursing Yarsi West Sumatra, Indonesia
bungsupera22@gmail.com

Abstact

Objective: The study was to determine the effect of progressive muscle relaxation and the Qur'an-Murottal on blood pressure in Older People hypertensive. Progressive muscle relaxation is stretching certain muscles and subsequently relaxing them. Qur'an-Murottal is the activity of listening to the Koran via MP3 and following it in your heart. **Method:** This research is a quasi experiment. The sampling method used was purposive sampling. The sample consisted of two groups of elderly people with hypertension. 15 people in the intervention group were given progressive muscle relaxation treatment and Koran-Murottal medication for 3 consecutive days and 23 people in the control group only had blood pressure checks for 3 consecutive days. Data processing using Mann Whitney. **Result:** The result *P value* for systolic blood pressure was 0.007 and the diastolic *P value* was 0.03, which means that there is an effect of the implementation of progressive muscle relaxation and the Qur'an-Murottal on blood pressure in Older People hypertension. **Conclusion:** Progressive muscle relaxation and Qur'an- Murottal can lower blood pressure and it is highly recommended for health practitioners who care for the Older People carry out these activities as a companion in lowering blood pressure in hypertensive older people.

Keyword : Older People;Hypertension;Progressive muscle, Relaxation;Qur'an Murottal

Introduction

Hypertension is a health problem that is often found in the older people, as evidenced by 10 older people, 8 people experience hypertension health problems¹. Older people with hypertension problem certainly really need proper care so that they can improve their health optimally².

Hypertension health problems at this time are caused by psychological factors called *Somatopsychics*, physical illnesses caused by psychics such as anxiety, depression and other psychological illnesses³. Nurses as health service providers to the community certainly provide a role to help hypertensive older people so that skills are needed to deal with their health problems, one of the interventions that can be given is relaxation⁴.

One of the relaxation that is given is progressive muscle relaxation and Qur'an-Murottal. A research suggested a progressive

muscle relaxation effect on blood pressure in the older people with *P Value* 0.001 in systolic blood pressure and a *P value* of in hypertensive older people with a *P value* of 0.07 for systole and 0.05 on diastolic *P value*⁵.

Research on the murottal Qur'an in hypertensive clients showed that Qur'an-Murottal obtained a *P Value* of 0.000 for systolic blood pressure and for diastolic blood pressure, the *P value* was 0.005. This means that the murottal Qur'an can affect a decrease in blood pressure in clients with hypertension, further research was conducted⁶.

From this background, the researchers will carry out a combination of the implementation of progressive auto relaxation and Murottal Qur'an in the older people with hypertensive health problems and see if there is an effect on blood pressure in hypertensive older people 0.005 in diastolic blood pressure. A research states that there is an effect of progressive

muscle relaxation⁷

Method

This study used a quasi-experimental design which was carried out in the working area of Puskesmas Guguak Panjang, Bukittiggi City. The method of sampling using Purpesive. The research sample consisted of 15 people as the intervention group and 23 people as the control group The implementation of progressive muscle relaxation and Qur'an-Murrotal was carried out in the intervention group for 3 days with the initial implementation of progressive muscle relaxation then carried out by the Qur'an-Murottal. Blood pressure was measured before the implementation of progressive muscle relaxation and the Koran-Murottal and after the implementation of progressive muscle relaxation of the Qur'an-Murottal. And the control group only had blood pressure checks for 3 consecutive days. Furthermore, the data were processed using Mann Whitney.

Results

In this study, the distribution of data is not normal and using Mann Whitney data processing, the results of this study can be seen as follows

Table 1. Demographics of Respondents

Respondent Characteristics	Intervention Group (n=15)		Control Group (n=23)	
	Intervention	%	Control Group	%
Age	70.33 ± 7.128		69.13 ± 7.097	
Gender				
Man	2	13,3	8	34.8
Woman	13	86,7	15	65.2
Education				
Primary School	5	33.3	6	26.1
Junior High School	3	20	4	17.4
Senior High School	3	20	10	43.5
Collage	4	26.7	3	13

Marital status				
Married	6	40	16	69.6
Widower/wido	9	60	7	30.4
w				

Table 2 Blood Pressure of Hypertensive older People Pre and Post Progressive Muscle Relaxation Interventions and Qur'an-Murotal

Average Systolic Blood Pressure	Mean	SD	P Value
Intervention Group	140.32	±14.61	0.007
Control Goup	141.96	±10.28	
Average diastole Blood Pressure Pre	Mean	SD	P Value
Intervention Group	132.8	±13.036	0.003
Control Goup	141.3	±11.146	
Average diastole Blood Pressure pre	Mean	SD	P Value
Intervention Group	84.58	± 5.856	0.003
Control Group	85.65	±5.359	
Average diastole Blood Pressure pre	Mean	SD	P Value
Intervention Group	81.13	±5.939	0.003
Control Group	83.41	±5.584	

Discussion

From the results of the study of progressive muscle relaxation and Qur'an-Murotal which was carried out for 3 days with a total sample of 15 intervention participants and 23 control participants. get the P value in the intervention group 0.007 at systolic pressure and diastole in the intervention group with a P value of 0.003.

From these results it can be interpreted that there is the effect of deep breath relaxation on the blood pressure of the older people with hypertension problems. The results of this study are in line with research conducted which states that there is an effect of progressive muscle relaxation with a *P value* in the intervention group of 0.001 on systolic blood pressure and a *P value* of 0.005 in the intervention group on diastolic blood pressure in the intervention group⁵. Further supporting research stated the effect of progressive muscle relaxation on blood pressure in the older people with intervention health problems as evidenced by a *P value* of 0.017 in the intervention group⁷. Next Research States that there is a decrease in blood pressure after progressive muscle relaxation in clients with hypertension with a *P value* of 0.000 in the intervention respondent and 0.005 in the intervention group⁸.

The next research conducted stated in his research that respondents who carried out the implementation of the Qur'an-Murrotal obtained a *P value* of 0.0000 for systolic blood pressure in the intervention group and 0.005 for the diastolic blood pressure in the intervention group⁶. Next research explaining the effect of the Qur'an-Murrotal on blood pressure, the was 0.000 on systolic blood pressure in the intervention group and on diastolic blood pressure was obtained at 0.001 in the intervention group⁹. Further research stated the same thing with previous studies with *P value* on blood pressure in the intervention group with *P Value* 0.006 in the intervention group¹⁰. From the description of the results of the research that has been carried out and the supporting research described, it can be concluded that there is an effect of progressive muscle relaxation and Qur'an- Murotal on blood pressure, especially in Older People hypertensive. Implementation of progressive muscle relaxation and Qur'an-Murotal are interventions given to the relaxation process for clients^{10, 8, 11, 12, 6}.

The health problem of hypertension is closely related to this psychological problem³.

Hypertension health problems at this time are more influenced by psychological health, this means that people who experience psychological problems will increase their blood pressure and we realize that the older people are very vulnerable to the occurrence of psychological problems, are more prone to stress and this is a factor that causes their blood pressure to increase.

Furthermore, the process of this research is very liked by the elderly because basically the movements carried out are not so draining and the existence of the Qur'an – Murotal becomes an attraction for the elderly to do this. Exercise and movements that do not drain energy during the implementation of progressive muscle relaxation, it is supported by changes in the spiritual process in the older people.

Next a study explains the effect of reading and listening to the Al- Qur'an, there is a change in the reaction to reduce nervous tension, resulting in loosening of the arteries and increasing blood levels in the skin and reducing heart rate, then this therapy works on the brain which will stimulate neuropeptide chemicals in brain that will be involved in the receptors so as to increase the comfort of the Clint⁶. Next in the manual for progressive muscle relaxation states that progressive muscle relaxation removes tension in the muscles so that the muscles relax¹¹. As previously blood pressure is caused by stress, so the progressive muscle relaxation process and the Qur'an-Murrotal are indispensable for lowering blood pressure³.

Conclusion

Progressive Muscle Relaxation and Murotal Qur'an are nursing interventions that can be given by nurses to the elderly with hypertensive health problems. The elderly and nurses can easily use this therapy and do not take a long time.

Acknowledgement

The researchers' gratitude to the Indonesian Ministry of Research and Technology for providing support to us in this research process

including the West Sumatra Islamic Hospital Foundation for Health Sciences, as well as the Guguak Panjang Community Health Center and its staff who have allowed us to carry out research on the older people in their work area and those who we really love the elderly both as the intervention group and the control group and other related parties who helped the smooth running of this research.

References

1. Mauk, K. L. (2014). *Gerontology Nursing Competencies For Care*. (A. Harvey, Ed.) (3rd ed.). United States of America: Ascend Learning Company
2. Miller, C. A. (2012). *Nursing For Wellness in Older Adults*. (Lippincott Williams & Wilkins, Ed.) (6th ed.). China: Wolters Kluwer.
3. Xu, W., Li, M., & Yao, J. (2016). Intervention of Collective Exercise on the Mental Health of Elderly Hypertensive Patients, *45*(3), 314-321
4. Touhy, T. A. (2014). *Gerontological Nursing & Healthy Aging*. (S. J. W. and M. Rawe, Ed.). United States of America: Jepperson
5. Kumutha, V., Aruna, S., & Poongodi, R. (2014). Effectiveness of Progressive Muscle Relaxation Technique on Stress and Blood Pressure among Elderly with Hypertension, *3*(4), 1-6
6. Hafifa Transyah, C. (2019). Pengaruh Terapi Murotal Al Quran Terhadap Penurunan Tekanan Darah Pasien Hipertensi. *Jik: Jurnal Ilmu Kesehatan*, *3*(1), 54-60. <https://doi.org/10.33757/jik.v3i1.142>
7. Suratini. (2013). Pengaruh Relaksasi Progresif terhadap Tingkat Penurunan Tekanan Darah Pada Lansia Hipertensi. *Jurnal Kebidanan Dan Keperawatan*, *9*(2), 193-204. <https://doi.org/10.1017/CBO9781107415324.004>
8. Arisjulyanto, D. (2018). The Effect of Progressive Muscle Relaxation Techniques to Decrease Blood Pressure for Patients with Hypertension in Mataram. *Primary Health Care Open Access*, *08*(04), 10-13. <https://doi.org/10.4172/2167-1079.1000309>
9. Sahputri, R. R. (2017). Pengaruh membaca al-quran terhadap tekanan darah penderita hipertensi di posyandu lansia punding gamping sleman yogyakarta. *Journal Publikasi Universitas 'Aisyiyah Yogyakarta*, 51 halaman
10. Annisa, T. (2017). Pengaruh mendengarkan dan membaca al quran terhadap penurunan tekanan darah pada lansia hipertensi di panti sosial tresna werdha mabaji gowa. *Skripsi*, 81-82.
11. Bernstein, D. a., Borkovec, T. D., & Hazlett-Stevens, H. (2000). *New Directions in Progressive Relaxation Training: A Guidebook for Helping Professionals* (Google eBook), 171. Retrieved from <http://books.google.com/books?id=m gChy82zL6MC&pgis=1>
12. Fitria, L. R. (2018). Pengaruh Murotal Al-Qur'an Surah Arrahman Terhadap Penurunan Tekanan Darah Pada Pasien Hipertensi Intradialis
13. Gurav, R., & Nahar, S. (2018). Effect of Progressive Muscle Relaxation on Anxiety in Geriatric Population. *International Journal of Scientific Research*, *7*(November), 75-78. Retrieved from https://www.researchgate.net/publication/335306079_Effect_Of_Progressive_Muscle_Relaxation_On_Anxiety_In_Geriatric_Population

PUBLIC PERCEPTION OF COVID-19 SUFFERERS, FAMILIES, AND CORPSE IN RIAU PROVINCE

Ari Pristiana Dewi¹, Agrina², Arneliwati³

^{1,2,3} Faculty of Nursing, University of Riau, Indonesia
ari.pristiana@lecturer.unri.ac.id

Abstract

Objective: This study aims to investigate public perception of covid-19 sufferers, their families, and the corpse of the victims in Riau Province. **Method:** The study used a descriptive research design. There were 398 research sample aged 17 years old above who were living in Riau. They were recruited using a purposive sampling technique. A questionnaire was used to collect data in which its validity and reliability were initially tested. Data were analyzed using univariate analysis. **Result:** Most of the respondents—as many as 205 people (51.5%)—were late adolescents; the majority of them was female, accounted for 296 people (74.4%); 49.5% of the respondents were in high school or equivalent (197 people) where 171 of them (43%) was student. The respondents were mostly Muslims (370 people). 50% of the respondents have positive perceptions and the other half have negative view. Most of the respondents had positive perceptions of the families of covid-19 sufferers (58.3%) and the corpse of covid-19 victims (61.8%). **Conclusion:** The society had a negative perception of covid-19 sufferers, their families, and the corpse of the victims. Thus, the society needs to be educated so that they will have a positive perception of covid-19 sufferers, families, and the corpse by continuing to carry out the covid-19 prevention protocol.

Keywords: Coronavirus, Covid-19, Perception, Public

Introduction

The covid-19 case in Indonesia was officially announced by President Jokowi at the presidential palace on March 2, 2020. He stated that two Indonesian citizens; a mother (64 years) and her daughter (31 years) were suspected of contracting the coronavirus due to contact with Japanese citizens who came to Indonesia¹. The covid-19 case has hit her to spread to various provinces in Indonesia. Data from the Ministry of Health of the Republic of Indonesia as of Friday, April 10, 2020, reported a total of 3.512 cases of covid-19, with details of 2.924 being treated, 282 people recovered and as many as 306 sufferers have died.

Many of the spread of covid-19 case in Indonesia has caused a public reaction. Indonesians show anxiety and concern with the

covid-19 case that has occurred around them; therefore showing a rather negative view towards the sufferers, families, and dead bodies of covid-19 victims. One of the people's overreactions that had happened was the community's refusal at two funerals when two nurses died in Semarang. After being rejected two times, the body was finally buried at night in the Kariadi Hospital, Semarang. The disapproving reactions of public to the sufferers, families and dead bodies of victims of covid-19 in Indonesia portrays people's perceptions of the covid-19—which is frequently perceived as a terrifying deadly disease².

Perception is a personal view of what happens. Everyone feels, interprets, and understands events differently³. Perception is a base of reactions manifested through actions. Actions are movements or actions of the body after

being stimulated or adapted from within the body itself or outside the body or the environment. Upon receiving certain stimuli from objects, body then assesses what is known and perform it. Perception affects the action or practice to be taken and is included in the first level of practice or action⁴.

The results of a survey of 10.199 respondents about people's perceptions of the current situation of the spread of covid-19 show that 69.6% of respondents considered the current situation serious and should not be underestimated, while 27.9% deemed the situation as an emergency and 2.5% thought that the spread of covid-19 was not a threat, exaggerated or they do not really know about it.

Furthermore, when asked about their understanding of covid-19, respondents who still claimed to be somewhat doubtful or did not know the symptoms of covid-19 reached 28%, 13.7% respondents were still doubtful or did not know how covid-19 spreads, and 26.1% were doubtful or do not know what to do and where. Based on the description above, the current research would like to investigate the perception of Indonesian people about covid-19 sufferers, families, and the corpse of the victims in Riau Province, Indonesia.

Method

This research is a quantitative research using a cross-sectional research design. The study was conducted in Indonesia using a questionnaire distributed using a Google form. The research was conducted for 5 months starting from April to September 2020. The sample in this study was not limited to the number of respondents, but the time for distributing questionnaires was restricted only until September 2020. There were 398 sample gained. The research stages included collecting data from the community about people's perceptions of sufferers, families, and dead bodies of coronavirus victims.

Data was analyzed using SPSS and a discussion was conducted by comparing the

existing theoretical concepts. Ensuring a well-directed data collection, the researcher carried out systematic research stages starting from the preparation, implementation, and final stages. The preparation stage was carried out by completing the licensing of research activities; the implementation was done carefully, and the final stages involved analysis of the results, discussion, and publication. A descriptive analysis of quantitative data was carried out. Quantitative data were then analyzed by using univariate analysis (frequency and percentage).

Results

There were 398 respondents recruited in the study. Most of the respondents—as many as 205 people (51.5%)—were late adolescents; the majority of them was female, accounted for 296 people (74.4%); 49.5% of the respondents were in high school or equivalent (197 people) where 171 of them (43%) was student. The respondents were mostly Muslims (370 people), and most of them were children in the family, as shown table 1 below

Table 1.
Characteristics of the respondents (n = 398)

Variables	Frequency (f)	Percentage (%)
Age		
Early Adolescents	5	1.3
Late Adolescents	205	51.5
Early Adult	50	12.6
Late Adult	38	9.5
Middle Age	40	10.1
Elderly	54	13.6
Very Old	6	1.5
Total	398	100
Gender		
Male	102	25.6
Female	296	74.4
Total	398	100
Last Education		
Undecated	28	7
Elementary School	63	15.8
Junior High School	29	7.3

Senior High School	197	49.5
University	81	20.4
Total	398	100
Occupation		
Government	18	4.5
Officer	28	7.0
Employee	171	43.0
Student	113	28.4
Jobless	33	8.3
Entrepreneur	35	8.8
Others		
Total	398	100
Religion		
Moslem	370	93
Christian Protestant	19	4.8
Chatolic	4	1.0
Budhism	3	0.8
Others	2	0.5
Total	67	100
Status in Family		
Father	55	13.8
Mother	77	19.3
Child	250	62.8
Others	16	4
Total	398	100

Table 2.
Perceptions of the respondents on sufferers, family and corpse of Covid-19 (n = 398)

Perception	Frequency (f)	Percentage (%)
Covid-19 Sufferers		
- Positive	199	50
- Negative	199	50
Total	398	100
Family of Covid-19 sufferers		
- Positive	232	58.3
- Negative	166	41.7
Total	398	100

Corpse of Covid-19		
- Positive	246	61.8
- Negative	152	38.2
Total	398	100

The results show an equivalent number of perceptions of covid-19; 50% have positive perceptions and the other half have negative view. Most of the respondents had positive perceptions of the families of covid-19 sufferers (58.3%) and the corpse of covid-19 victims (61.8%).

Discussion

Perception can be described as a personal view of events surround. Each person feels, interprets, and understands events differently³. The results of this study designate that 50% respondents perceive covid-19 pandemic (i.e. sufferers, their families, and the corpse of the victims) positively, while the rest has negative perceptions towards it. Positive perceptions towards covid-19 patients implies a belief that covid-19 patients can recover through hospital care, will not be isolated after recovering, and can be accepted back into society in general⁵. On the contrary, those seeing covid-19 patients negatively believe that the sufferers should be isolated at home for the rest of their lives so that they do not infect the surrounding community. In short, it can be clearly understood that perception can influence the action or practice to be taken and is included in the first level of practice or action⁴.

Most respondents have a positive perception of families with covid-19 (58.3%). This indicates that the respondent has the view that the families of covid-19 patients can still be accepted by the respondents, continue to communicate and interact if the family has a negative SWAB test result; and the home conditions of the covid-19 patient's family are sprayed with disinfectants and need help with their basic needs during the isolation period⁶.

The majority of the respondents also regard the dead body of covid-19 victims affirmatively (61.8%). It can be underlined that positive

acceptance of respondents means that the covid-19 dead body can be well received to be processed such as conducting the funeral, in a condition that it has to follow the protocol of covid-19 regulated by the nearby hospital or Covid-19 Task Force⁷.

Overall, it can be concluded that the perception of people in Riau towards covid patients, families and bodies is a positive perception. The researcher assumes that the respondents of this study are mostly students who have received education about covid-19 appropriately so that they have positive perceptions. This is an opportunity for respondents to provide education to families about covid-19 patients, families and bodies; hence, they can take appropriate action both for the prevention and treatment of covid-19.

Conclusion

Most of the respondents in the study were late adolescents; the majority of them was female, and almost half of the respondents were in high school or equivalent. The respondents were mostly Muslims. 50% of the respondents had positive perceptions and the other half had negative view. Most of the respondents had positive perceptions of the families of covid-19 sufferers (58.3%) and the corpse of covid-19 victims (61.8%).

Acknowledgment

The authors would like to thank the Faculty of Nursing, Universitas Riau for funding this study.

References

1. Ihsanuddin. "Complete Facts on the First Case of Corona Virus in Indonesia",. 2020; Available from: Complete Facts on the First Case of Corona Virus in Indonesia
2. WHO. COVID - 19 Strategy Up Date. 2020;(April):18.
3. Potter P. & PAG. Fundamental of Nursing. Jakarta: EGC; 2012.
4. Notoatmodjo S. Health research methods. Jakarta: Rhineka Cipta; 2012.
5. Law PK. COVID-19 Pandemic: Its Origin, Implications and Treatments. Open J Regen

Med. 2020;09(02):43–64.

6. Zhang J, Cao F, Wu SK, Xiang-Heng L, Li W, Li G sen, et al. Clinical characteristics of 31 hemodialysis patients with 2019 novel coronavirus: a retrospective study. Ren Fail [Internet]. 2020;42(1):726–32. Available from: <https://doi.org/10.1080/0886022X.2020.1796705>
7. Ma Y, Ph D, Diao B, Ph D, Lv X, Liang W, et al. HD center in Wuhan , China. 2020;

THE CORRELATION BETWEEN THE PERCEPTIONS ON PARENTING STYLE AND ADOLESCENTS' AGGRESSIVE BEHAVIOR

Martina Desri Nurafisa¹, Raja Fitriana Lestari², Agnita Utami³
School of Nursing, University of STIKES Hang Tuah Pekanbaru
Email: rajafitrialestari@htp.ac.id

Abstract

Objective: To determine the relationship between the perception of parenting style toward adolescents' aggressive behavior. **Method:** This was a quantitative study with a *cross-sectional design*. The population was the students of 10 and 11 grade of State Senior High School 10 Pekanbaru. About 168 of them were selected using *Cluster Sampling*, and questionnaire as the instrument, while the data analysis used a Chi square test. **Result:** The results showed that 20 respondents perceived authoritarian parenting style with very high aggressive behavior of 13 persons (65.0%), the permissive was perceived by 31 respondents with high aggressive behavior of 21 persons (67.7%), and 100 respondents perceived the democratic with medium aggressive behavior of 45 persons (45%). The result indicated the P-value <0.001, meaning that there was a significant correlation. **Conclusion:** The school's stakeholders are expected to monitor the development of students' behavior, and the parents need to be consistent in order to overcome the adolescents' problems.

Keywords: Adolescents, Aggressive Behavior, Parenting Style

Introduction

Adolescence is a transition phase from childhood to adulthood, starting from the age of 11 or 12, and ending at 18 to 20. During this period, the physical, cognitive, social, and emotional maturity process occurs. It is also known as the period of an identity crisis, where teenagers experience high liability and sensitivity, and the inability to function and control emotion in term of psychic and sensory. Adolescents' inability to control emotion causes difficulty in dealing with personal problems, which leads them to behave violently¹. The data regarding physical and psychological violence from Indonesian Child Protection Commission (KPAI) showed that in 2019 there were 153 cases found, the 39%, 22% and another 39% of them happened to elementary, junior and senior high school students/equivalent respectively.²

Many factors are affecting aggressive behavior among adolescents, one of which is parenting

style. A study showed that there are differences among students living under authoritarian, democratic, and permissive parenting methods³. The initial study on March 09, 2020 at State Senior High School '10' with 10 students found that 5 males have committed both physical and verbal aggressive behaviors, while 5 females committed verbal aggressive behavior only. Based on that, a study on "correlation between perception on parenting style and aggressive behavior among adolescents" is targeted.

Method

This was a correlative descriptive study that used a cross-sectional approach. The population used was all students of grade X and XI of State Senior High School '10' in Pekanbaru comprising of 710 respondents. Among which those having complete and alive parents were selected using cluster sampling,

while data were collected with the questionnaire.

Results

Univariate Analysis

1. Respondents' characteristics

Table 1
Frequency Distribution of Respondents Based on Gender

No	Gender	F	%
1.	Males	58	38.4
2.	Females	93	61.6
Total		151	100

Based on table 1.1, the majority of the respondents were females with a total of 93 participants (61.6%).

Table 2
Frequency Distribution of Respondents Based on Age

No	Age	F	%
1.	15-17	148	98.0
2.	18-20	3	2.0
Total		151	100

Based on table 1.2 above, the majority of the respondents were 15-17 years old, comprising 148 participants (98.0%).

Table 3
Frequency Distribution of Respondents Based on Their Fathers' Age

No	Age	F	%
1.	36-45	41	27.2
2.	46-55	87	57.6
3.	56-65	23	15.2
Total		151	100

According to table 1.3, the majority of respondents' fathers' were between 46-55 years old (87 participants or 57.6%).

Table 4
Frequency Distribution of Respondents Based on Their Fathers' Education

No	Fathers' Education	F	%
1.	Elementary-Junior High School	41	27.2
2.	Senior High School	87	57.6

3.	University	23	15.2
Total		151	100

Based on table 1.4, the majority of respondents' fathers were high school graduates (75 participants or 40.7%)

Table 5
Frequency Distribution of Respondents Based on Their Mothers Age

No	Age	F	%
1.	26-35	4	2.6
2.	36-45	68	45.0
3.	46-55	79	52.3
Total		151	100

Based on table 1.5, the majority of respondents' fathers' were between 46-55 years old (79 participants or 52.3%).

Table 6
Frequency Distribution of Respondents Based on Their Mothers Education

No	Mother's education	F	%
1.	Elementary-Junior High School	21	13.9
2.	Senior High School	76	50.3
3.	University	54	35.8
Total		151	100

According to table 1.6, the majority of respondents' mothers were high school graduates (76 participants or 50.3%).

2. Research Variable

Table 1
Frequency Distribution of Respondents Based on Perception of Parenting Style and Aggressive Behavior

No	Variable	F	%	
1.	Perception of Parenting Style	authoritarian	20	13.2
		permissive	31	20.5
		democratic	100	66.2
2.	Aggressive Behavior	Middle	52	34.4

High	62	41.1
Very High	37	24.5
Total	151	100

Based on Table 2.1, the majority of the participants perceived democratic parenting style with the total of 100 persons (66.2%) The aggressive behavior was in the high category with 62 participants (41.1%).

treat formed from social and cultural factors. Males showed aggressive behavior in the form of physicality, while the opposite sex showed it emotionally.

2. Age of the Respondents

The results showed that majority of the respondents were adolescents aged 15-17

Bivariate Analysis

The Correlation between Perception towards Parenting Style and Aggressive Behavior among Adolescents

Perception towards their parents' parenting style	Aggressive Behavior								P-value
	Medium		High		Very High		Total		
	n	%	n	%	n	%	N	%	
authoritarian style	4	20.0	3	15.0	13	65.0	20	100.0	<0.001
permissive style	3	9.7	21	67.7	7	22.6	31	100.0	
democratic style	45	45.0	38	38.0	17	17.0	100	100.0	
Total	52	34.4	62	41.1	37	24.5	151	100.0	

Based on the table above, the least perceived parenting style was authoritarian, which included 20 participants with 13 persons that had very high aggressive behavior (65.0%). The permissive style was perceived by 31 participants with high aggressive behavior of 21 persons (67.7%). The majority which comprised of 100 participants, perceived the democratic style with medium aggressive behavior of 45 persons (45%). The result of *chi square test* indicated P-value <0.001, meaning there was a correlation between the perception towards parenting style and aggressive behavior among adolescents.

years. Adolescents in this range had a tough time personally and also with the adults that interacted with them. This condition occurred because these teenagers always had demands that were difficult to compromise with their parents and were full of unstable emotion.

3. Parents' Age

The result showed that the students' parents were majorly 46-55 years old. Those in this age range need to be capable of understanding and shaping their children's personality, not restraining and providing too much freedom for them. They need to control the attitude and behavior of their children to prevent aggressiveness.

4. Parents' Education

The result showed that majority of the respondents' fathers and mothers were senior high school graduates. While a study reported that there is a correlation between parents'

Discussion

Univariate Analysis

1. Gender

The result showed that the respondents were majorly females. Besides, gender is a given

level of education and children's aggressiveness⁴. Inconsistency and high demands from parents trigger aggressiveness in children.

5. Participants' Perception on Parenting

The result showed that the dominant perception on parenting style was democratic. It also indicated that the authoritarian style was the least applied. In case the initial education teaches authoritarian, children tend to imitate what their parents always do. Another result showed permissive style in the second place. The children that were freed by their parents often had indecisive personality and tend to blatantly behave aggressively. The last discussion revealed that majority of the respondents perceived democratic parenting. Such style applied by parents lead to effective communication, however, it is worth to note that adolescents are in the middle of transition stage. Transition and change with rapid physical and mental growth sometimes make adolescents think their parents' attention is a demand that needs fulfillment. This leads to emotional instability, and also affects behavior development among adolescents. Aggressive behavior is affected by both parenting style and external factors.

6. Adolescents' Aggressive Behavior

The result showed that the majority of aggressive behavior was in the high category. During the adolescence phase, besides experiencing physical, psychological and social maturity, teenagers need to also deal with a variety of stressors. This leads to behaving uniquely and experiencing difficulties in controlling their emotion and behavior, which then causes aggressiveness.¹

Bivariate Analysis

Correlation between Adolescents' Perspective on Parenting Style and Aggressive Behavior among Teenagers

The result of *chi square* test showed that there was a correlation between the perspective on

parenting style and aggressive behavior among adolescents. It also indicated that the least perceived was authoritarian style with very high aggressive behavior. Parents that often gave their children physical punishment made them became upset and later released that feeling to other people in the form of aggressiveness.⁵ Another result showed that adolescents perceived permissive parenting with high aggressive behavior, placing this style in the second position between the authoritarian and democratic. Those that always ignored their children indirectly let them became more aggressive.⁶ The study finally showed that respondents perceived democratic parenting style with middle aggressive behavior, which is contradictory. Since it stated that adolescents subjected to this style tend to have easy-to-cooperate behavior and excellent self-control.⁵ However, it is unavoidable that friendship and influence from the environment need to be taken into account since aggressive behavior is adoptable from these sources.

Conclusion

The most dominant perception of parenting style is democratic, followed by permissive and authoritarian. The majority of aggressive behavior is on the level of 'high'. Therefore, there is a correlation between perception on parenting style and aggressive behavior among adolescents.

Acknowledgement

The authors are grateful to all supervising lecturers that guided in the course of this study. The authors are also grateful and to the parents, friends, and all parties that helped.

References

1. Jahja Y . Psikologi perkembangan. Jakarta: Kencana; 2011.
2. KPAI. Data kasus anak berdasarkan pemantauan media cetak. <http://bankdata.kpai.go.id/tabulasi-data/data-kasus-dari-media-cetak/data-kasus-anak-berdasar-pemantauan-media-cetak-2016>. 2019. [diakses 26 Februari 2020].

3. Novita E. Perbedaan agresivitas ditinjau dari pola asuh orang tua. *J Magister Psikologi UMA*. 2012; 4: 53-60. <http://ojs.uma.ac.id>
4. Yulisetyaningrum, Indanah, Andriany S. Hubungan pendidikan dan pekerjaan orang tua dengan perilaku agresif pada anak usia sekolah di MI Muhammadiyah 2 Kudus. *University Research Colloquium*. .2018. repository.urecol.org
5. Susanto A. *Bimbingan dan konseling di taman kanak-kanak*. Jakarta: Kencana; 2015.
6. Hidayati N. Bullying pada anak: analisis alternatif dan solusi. *J INSAN*. 2012; 141: 41-48. Journal.unair.ac.id.

SOCIODEMOGRAPHIC CHARACTERISTICS OF ELDERLY WITH HYPERTENSION AND COGNITIVE FUNCTIONS

Reni Zulfitri¹, Ari Pristiana Dewi², Didi Kurniawan³

^{1,2,3}School of Nursing Universitas Riau Pekanbaru, Riau, Indonesia
reni.zulfitri@gmail.com

Abstract

Objective: This study aims to determine the correlation between the sociodemographic characteristics of the elderly with hypertension to cognitive function. **Method:** This is a descriptive correlational study that was conducted in Pekanbaru City. This study involved 86 elders with hypertension that were recruited using a purposive sampling technique. Data on sociodemographic characteristics of the elderly with hypertension were obtained by using questionnaires and cognitive function data were obtained by using MMSE (Mini-Mental Status Examination). **Result:** The Chi-square test showed a significant relationship between gender, educational level, marital status, employment status with the cognitive function of the elders (p - value < 0.05). **Conclusion:** The condition of the cognitive function of the elderly can be influenced by the sociodemographic characteristics of the elderly, such as gender, education, employment status, and marital status.

Keywords: Sociodemographic Characteristics, Elderly with Hypertension, Cognitive Function

Introduction

The high population of the elderly is at risk of various holistic health problems, such as biological, psychological, social and spiritual health problems. One of the biological health problems that tend to be experienced by the elderly is a chronic non-communicable health problem, namely hypertension.

Hypertension is one of the main health problems experienced by the elderly. Hypertension occurs due to disorders of the circulatory system or the cardiovascular system, is chronic or chronic even throughout life, cannot recover as usual, and has a very high prevalence rate¹ This hypertension is also a silent killer, where many sufferers does not show any complaints or symptoms, but is one of the causes of death².

According to^{3,4}, hypertension is caused by the aging process. Blood vessels in the elderly

In addition to the aging process, several social experience loss of elasticity so that peripheral vascular resistance increases demographic factors in the elderly also influence the occurrence of hypertension, such as: gender, education level, occupation^{2,5}.

Gender factors affect the occurrence of hypertension^{6,7}, Women at the age of 65 years and over or the elderly are more at risk of developing hypertension than men. This condition is influenced by hormones. A woman who has entered menopause is more at risk for obesity which will increase the occurrence of hypertension⁸.

In addition,⁹ shows that the level of education and work are also related to the proportion of hypertension. The higher the level of education of a person shows a tendency to decrease the incidence of hypertension (the proportion of hypertension in people who do not go to school, is 51.6% and people with diploma education and above are only 28.3%) The same

is for employment status. The proportion of hypertension in people who do not work is higher than those who work².

Hypertension can slowly damage the body and blood vessels in most parts of the body, including damage to brain function¹. Research conducted¹⁰ states that hypertension disrupts the structure and function of cerebral blood vessels, leads to ischemic damage of white matter regions critical for cognitive function.

Elderly suffering from hypertension has decreased brain function due to narrowing and sclerosis of small arteries in the subcortical area, which results in decreased blood flow, loss of autoregulation, decreased brain barrier, and microinfarction. This condition is at risk for cognitive dysfunction¹¹.

The examination used to detect the occurrence of cognitive disorders is through the Mini Mental State Examination which includes, orientation, registration, attention, and calculation, recall, and language¹². Research^{5,13} show that the socio-demographic characteristics (such as gender, education, marital status and employment status) of the elderly have a relationship with the risk of developing dementia.

Based on this description, the researcher is interested in examining the socio-demographic characteristics of the elderly who have hypertension with their cognitive function. The purpose of this study was to determine the correlation between the socio-demographic characteristics of hypertensive elderly with cognitive function.

Method

This is a descriptive correlational study that was conducted in the working area of Payung Sekaki Subdistrict Public Health Center in Pekanbaru. This subdistrict had the highest elderly population compared to other Public Health Centers. This study involved 86 elders who were recruited using purposive sampling technique according to the inclusion criteria, including: elderly aged 60 years and above,

and have hypertension. The data was collected through questionnaires.

Data on the sociodemographic characteristics of the elderly were collected through a questionnaire in the form of closed questions consisting of: age, gender, religion, ethnicity, education, marital status and occupation. Data on the risk of dementia were collected through a valid and reliable Mini Mental State Examination (MMSE) questionnaire. The MMSE consists of 11 questions measuring 5 areas of cognitive function consisting of orientation, registration, attention and calculation, repeating, and language. The study will conduct an MMSE test for 5-10 minutes. The maximum score on the MMSE examination is 30, a score ≥ 24 is said to have no cognitive impairment and a score < 24 is said to have cognitive impairment.^(14,15). This research has followed ethical principles by seeking informed consent from all respondents while maintaining anonymity and confidentiality.

Data analysis in this study was univariate and bivariate using computer software. Univariate analysis in the form of frequency distribution (%) and bivariate analysis using Chi Square test with p value (0.05).

Results

1. Sociodemographic characteristics

Table 1
Frequency Distribution of Sociodemographic Characteristics of Elderly (N=86)

No	Characteristic of elderly	N	%
1.	Age:		
	Elderly (60-74 y.o)	64	74.4
	Oldi (75-90 y.o)	22	25.6
2.	Gender:		
	Male	33	38.4
	Female	53	61.6
3.	Religion:		
	Islam	79	91.9
	Christian	7	8.1

4. Tribe:			
Minang	40	46.5	
Jawa	22	25.6	
Melayu	15	17.4	
Batak	9	10.5	
5. Level of education:			
Elementary School	44	51.2	
Junior school	23	26.7	
High School	18	20.9	
College graduates	1	1.2	
6. Marital Status:			
Not Married	0	0	
Married	39	45.3	
Widow/widower	47	54.7	
7. Occupations:			
Government employees	3	3.5	
Private staff	0	0	
Entrepreneur	31	36.0	
Unemployed	52	60.5	

2. The description of cognitive function in the elderly with hypertension

Table 2
Frequency Distribution Based on the description of cognitive function in the elderly with hypertension (N=86)

No.	Cognitive function conditions	N	%
1.	Positive	41	47.7
2.	Negative	45	52.3
	Total	86	100.0

3. Relationship between sociodemographic characteristic with cognitive function

Table 3
Relationship between sociodemographic characteristic with cognitive function (N=86)

No	Socio Demographic characteristic	Cognitive Function				N	P value
		Positive		Negative			
		N	%	n	%		
1	Gender					0.000	
	Female	14	26.4	39	73.6	53	
	Male	27	81.8	6	18.2	33	
	Total	41		45		86	
2	Education					0.000	
	Elementary school	13	29,5	31	70,5	44	

	Junior School	14	60.9	9	39.1	23
	High School	13	72.2	5	27.8	18
	College Graduates	1	100	0	0	1
	Total	41		45		86
3	Marital Status					0.000
	Not Married	0	0	0	0	0
	Married	29	74.4	10	25.6	39
	Widow/widower	12	25.5	35	74.5	47
	Total	41		45		86
4	Occupations:					0.000
	Government employees	3	100	0	0	3
	Private staff	0	0	0	0	0
	Entrepreneur	25	80.6	6	19.4	31
	Unemployed	13	25.0	39	75.0	52
	Total	41		45		86

Discussion

Socio-demographic characteristics of the elderly (such as gender, education, marital status and employment status) have a relationship with the risk of dementia^{2,5,13}. Cognitive decline is more at risk for women due to the high life expectancy of women compared to men, so that the female elderly population is more⁶. Women at the age of 65 years and over or the elderly are more at risk of developing hypertension than men. This condition is influenced by hormones. A woman who has entered menopause is more at risk for obesity which will increase the occurrence of hypertension⁸.

Hypertension can slowly damage the body and blood vessels in most parts of the body, including damage to brain function¹. Research conducted¹⁰ states that hypertension is a major factor in damage to target organs, one of which is the brain.

Elderly suffering from hypertension has decreased brain function due to narrowing and sclerosis of small arteries in the subcortical area, which results in decreased blood flow, loss of autoregulation, decreased brain barrier, and microinfarction. This condition is at risk for cognitive dysfunction¹¹.

Elderly with a history of higher education have more brain mass and are able to adapt to cognitive and neurodegenerative changes than

elderly people with lower education.¹³ A good marital status with a spouse can be a social support that helps the elderly in their daily life.¹³. Elderly with low activity are at risk of experiencing cognitive decline due to routine definite activities such as work, so that the brain will always work to think due to these brain stimuli^{6,13}.

Conclusion

The results showed that the majority of hypertensive elderly respondents were 60-74 years old, female, Muslim, Minang ethnicity, with primary school education, widow/widower marital status, and unemployment, and most of them experienced cognitive dysfunction. The results of the bivariate analysis (Chi Square test) showed that there was a relationship between sociodemographic characteristics: gender, education, marital status, and occupation with cognitive function (p value <0.005).

Acknowledgement

Researchers highly appreciate the School of Nursing for providing grant for this research, Pekanbaru Local Health Department, and the Head of Payung Sekaki Public Health Center.

References

1. Smeltzer SC. Keperawatan medikal bedah brunner & suddarth. Jakarta: EGC; 2013.
2. Kementerian Kesehatan RI. Hipertensi si pembunuh senyap. Jakarta: Pusat data dan informasi Kementerian Kesehatan RI; 2019.
3. Miller CA. Nursing for wellness in older adults. 6th ed. China: Lippincott Williams & Wilkins; 2009.
4. Islam MS. Hypertension: from basic research to clinical practice. InHypertension: from basic research to clinical practice 2016 (pp. 1-2). Springer, Cham. https://link.springer.com/chapter/10.1007/584_2017_30
5. Liang X, Shan Y, Ding D, Zhao Q, Guo Q, Zheng L, Deng W, Luo J, Tse LA, Hong Z. Hypertension and high blood pressure are associated with dementia among Chinese dwelling elderly: The Shanghai aging study. *Frontiers in neurology*. 2018 Sep 4;9:664. <https://www.frontiersin.org/articles/10.3389/fneur.2018.00664/full>
6. Gamage MW, Hewage C, Pathirana KD. Associated factors for cognition of physically independent elderly people living in residential care facilities for the aged in Sri Lanka. *BMC psychiatry*. 2019 Dec;19(1):1-2. <https://bmcp psychiatry.biomedcentral.com/articles/10.1186/s12888-018-2003-5>
7. WHO. Hipertensi si pembunuh senyap. Jakarta: Pusat Data dan Informasi Kementerian Kesehatan RI; 2019.
8. Prasetyaningrum YI, Gz S. Hipertensi bukan untuk ditakuti. *FMedia*; 2014 Juni 1
9. Kementerian Kesehatan RI. Riset kesehatan dasar 2018. Jakarta: Pusat penelitian dan pengembangan kesehatan Kementerian Kesehatan RI; 2019.
10. Iadecola C, Yaffe K, Biller J, Bratzke LC, Faraci FM, Gorelick PB, Gulati M, Kamel H, Knopman DS, Launer LJ, Sacczynski JS. Impact of hypertension on cognitive function: a scientific statement from the American Heart Association. *Hypertension*. 2016 Dec;68(6): e67-94.
11. Suhardjono. Hipertensi pada usia lanjut. Dalam: Sudoyo AW, Setiyohadi B., Alwi I, Simadibrata M & Setiati S. Buku ajar ilmu penyakit dalam 5th ed. Jakarta: Interna Publishing;; 2009
12. Kushariyadi. Asuhan keperawatan pada klien lanjut usia.. Jakarta: Salemba Medika; 2010.
13. Sari CW, Ningsih EF, Pratiwi SH. Description of dementia in the elderly status in the work area health center Ibrahim Adjie Bandung. *Indonesian Contemporary Nursing Journal*. 2018 Aug 30;3(1):1-1.
14. Kurlowicz L, Wallace M. The mini mental state examination. Hartford Institute for Geriatric Nursing; 1999
15. Perhimpunan Dokter Spesialis Saraf Indonesia. Panduan praktik klinik: diagnosis dan penatalaksanaan demensia. Jakarta: PERDOSSI; 2015.

EFFECT OF TIME MANAGEMENT, MOTIVATION AND SELF-EFFICACY ON THE LEARNING ACHIEVEMENT OF NURSING STUDENTS

Reni Asmara Ariga¹, Siti Zahara Nasution², Cholina Trisa Siregar³, Lufthiani⁴, Fajar Amanah Ariga⁵, Ikhsanuddin Ahmad Harahap⁶, Selviani Ariga⁷, Sri Budi Astuti⁸

^{1,2,3,4,5,6}Faculty of Nursing, Universitas Sumatera Utara

^{7,8}Public Health, Medan, Indonesia

reni.asmara.ariga@usu.ac.id

Abstract

Objective: Identify influence of time management, motivation and self-efficacy on learning achievement of nursing students at USU. Method: Quantitative, analytical descriptive method, from January-August 2020 at Faculty of Nursing. Population 179 with total sampling, used google form contain time management, motivation, self-efficacy and learning achievement questionnaire. Validity 0.79, reability 0.87. Analyzed with chi-square statistic $\alpha=0.05$. Approval from USU Nursing Health Research Ethics Commission and informed consent from each respondent. Result: Good time management 107 (59.5%), bad time management 72 (40.5%). High intrinsic motivation 177 (99.05%), medium 2 (0.95%). High extrinsic 148 (82.86%), medium 31 (17.14%). High self-efficacy 32 (18%), medium 147 (82%), no low self-efficacy. Good time management was 107 (59.5%). High intrinsic motivation was 177 (99.05%). High extrinsic motivation was 148 (82.86%). High self-efficacy was 32 (18%), medium 147 (82%). Achievement: very satisfied was 60 (33.3%), satisfied was 102 (57.1%), less was 17 (9.6%). Achievement: very satisfied 60 (33.3%), satisfied 102 (57.1%), less 17 (9.6%). Correlation between management, self-efficacy on learning achievement ($p=0.0001$) and correlation between intrinsic, extrinsic motivation on learning achievement ($p=0.466$), ($p=0.085$). Conclusion: Time management and self-efficacy had influence learning achievement, while motivation had no effect learning achievement.

Keywords: Learning Achievement, Motivation, Self-Efficacy, Students, Time Management

Introduction

After completing high school or vocational high school education, students are often faced with very difficulties choices, especially while determining the next educational path. However, having dreams does not necessarily guarantee continuing education to higher education, but must have adequate intellectual abilities and supported by adequate financial capabilities as well. The Nursing Science program is one of the professional education pathways in health sector estimated to have a large audience in the 1980s to 2000s¹.

Nursing was recognized by the government in accordance with the provisions of laws and regulations. agreement stipulating the acceptance of nursing as a professional service. In addition, nursing education is attributed as a professional education².

This program has significantly progressed in Indonesia. People who become nurses in Indonesia is increasing. This is considered to be a huge leap forward, triggered by an

The students were required to master the new environment during this transitional period. Moreover, an individual's adjustment was influenced by the factor of self-efficacy³. Also, adequate time management between studying and adapting to growth implementations as well as task development was essential. Nursing care is in the form of a process for setting and achieving goals, disiplining oneself, reducing stress levels and making time management⁴.

The possession of time management skills is very effective in academic success⁵. This transitional period features the need for

motivation, especially through college. Therefore, a higher supply of inspiration towards a field is theoretically expected to produce satisfactory learning achievements⁶.

The motivation concept comprises an individual's willingness to engage in learning activities for self-interest without expecting a return⁷. However, highly ambitious people are potentially unable to attain a satisfactory learning achievement index under some conditions⁸.

These specific circumstances are appealing to researchers interested in understanding the effect of time management, motivation and self-efficacy on the learning achievements of USU nursing students.

Method

This research was a quantitative research, using an analytical descriptive method conducted from January to August 2020 in Faculty of Nursing Sumatera Utara, Medan. Used total sampling technique was 179 students from Faculty of Nursing in 2019. In addition, data was collected used google forms containing time management, motivation, self-efficacy and learning achievement questionnaire and was distributed via WhatsApp group and personal chats. Validity was 0.79 and reability was 0.87. This research was analysed with chi-square statistic $\alpha = 0.05$ was applied in analysis. This research was received approval from the USU Nursing Health Research Ethics Commission. And informed consent from each respondent was obtained.

Results

The students with the ability to properly manage time and demonstrate good self-efficacy have a greater tendency to produce good learning achievements. This outcome was difference from motivation, which showed an inversely proportional relationship.

Table 1
Frequency distribution of motivation, time management, self-efficacy and learning achievement.

Kategori	Category	n	%	
Time Management	Good	107	59.5	
	Bad	72	40.5	
Motivation	In	High	177	99.05
		Medium	2	0.95
	Ex	High	148	82.86
		Medium	31	17.14
Self-efficacy	High	32	18	
	Medium	147	82	
	Low	0	0	
	Very	60	33.3	
Learning Achievement	Satisfied	102	57.1	
	Less	17	9.6	

This study recognized the effect of time management on learning achievement. The results of the chi-square independence test inform that there is a significant association between time management and learning achievement. $X^2(2) = 55.221, p = 0.000, \phi^3 = 0.239$.

In addition, intrinsic and extrinsic motivation category had no effect on learning achievements. The results of the chi-square independence test inform that there is no significant association between both intrinsic and extrinsic motivation and learning achievement. $X^2(2) = 1.527, p = 0.466, \phi^3 = 0.302$.

The concept of self-efficacy affected learning achievement. The results of the chi-square independence test inform that there is a significant association between self-efficacy and learning achievement. $X^2(2) = 64.808, p = 0.000, \phi^3 = 0.250$.

Discussion

This study showed the effect of time management on student achievement. The findings were supported, where individuals with good performance reportedly have the capacity of manage time properly⁹. In addition, higher learning efforts have a direct association with greater achievements, therefore maximum output is expected. This is possibly fulfilled through various means, and curriculum learning as well as implementation was predominant. Furthermore, personal education facilitates the acquisition of

cognitive, affective, psychomotor abilities¹⁰. The learning process in nursing involves applying both hard and soft skills¹¹.

Based on a contrast with time management, student motivation had no effect on learning achievement. This finding where no association was established in terms of learning outcomes, and the entire professional nursing journey. Furthermore, this phenomenon possibly results from other related factors, including the IQ, EQ, SQ, CQ, AQ, completeness of the body, personal interests, talents, motives, material, environment, and instruments¹².

Compared to motivation, self-efficacy is directly proportional to student achievement. This finding is higher self-confidence had a direct and positive impact on learning outcomes. However, the inverse was observed in students with low self-confidence¹³.

Conclusion

The results and discussions show the effect of time management and self-efficacy on student's learning achievement, while motivation had an inverse relationship.

Acknowledgement

The authors are grateful to the Chancellor of USU, Head of the Research Institute and to all participating respondents.

References

1. Agustiana S. Relationship of Interests and Motivation to Become a Nurse with Learning Achievement (In Nursing D III Study Program Students at Hutama Abdi Husada College of Health Sciences, Tulungagung). Doctoral dissertation, UNS (Sebelas Maret University). 2013; 2(1):28-36. <https://digilib.uns.ac.id/dokumen/detail/18521/Hubungan-Minat-dan-Motivasi-Menjadi-Perawat-Dengan-Prestasi-Belajar-Pada-Mahasiswa-Program-Studi-D-III-Keperawatan-di-Sekolah-Tinggi-Ilmu-Kesehatan-Hutama-Abdi-Husada-Tulungagung>
2. Lestari TRP. Expectations for the Nursing Profession in Indonesia. Study. 2014; 79 (7):1-2. <https://jurnal.dpr.go.id/index.php/kajian/article/view/548>
3. Crede M, Niehorster S. Adjustment To College As Measured By The Student Adaption To College Questionnaire: A Quantitative Review Of Its Structure And Relationship With Collerates And Consequences. Educational Psychology Review. 2011;24(1):133-165. <https://Link.Springer.Com/Content/Pdf/10.1007/S10648-011-9184-5.Pdf>
4. Azam KR, Jamileh F, Monirsadat N, Sakineh M, Golnaz F. The Effectiveness of a Time Management Workshop on Job Stress of Nurses Working in Emergency Departments: An Experimental Study. Journal of Emergency Nursing. 2020;46(1):548-549. <https://doi.org/10.1016/j.jen.2020.03.01>
5. Karakose T. The Relation Between Time Management Skills and Academic Achievement of Potential Teachers. Educational Research Quarterly. Ethno Med.2015;9(1):19-24. <http://doi.org/10.1080/09735070.2015.11905418>
6. Annie SD, Carla MSH, Cecilia C, Rachel W. Exposure to information increases motivation to learn more. Learning and Motivation. 2020;72(1):2-3. <https://doi.org/10.1016/j.lmot.2020.101668>
7. Ai M, Kou M, Clemens ML. The developmental trajectory of intrinsic reading motivation: Measurement invariance, group variations, and implications for reading proficiency. Contemporary Educational Psychology. 2020;63(1):1-2. <https://doi.org/10.1016/j.cedpsych.2020.101921>
8. Sunarya PO, Ladjamuddin A, Dewanto IG. The Relationship Between Time Management and Student Achievement in D-III Computerized Accounting Study Program. 2017;3(2):115-121. <http://ejournal.raharja.ac.id/index.php/cices/article/view/434>

9. Reni AA. Higer Education Curriculum Design Graduate Program That Refer to National Qualification Framework for Indonesia (KKN) and national Standard of Higher Education (SNPT) to be Ap [lied in the University of North Sumatra. *International Journal of Applied Business and Economic Research*. 2017;15(25):271-277.
10. Reni AA. Siti ZN. RA. Dardanila. Rika E. Siti SN. Stakeholder Perception about Soft Skill Graduated Faculty of Nursing, University of North Sumatra. *Science Technology Publication*. 2018; 1(1):514-518.
<http://doi.org/10.5220/0010076805140518>
11. Seran AED, Gaudentiana UB, Christina MM. The Relationship between Motivation to Become a Professional Nurse and Learning Outcomes in Semester V Level III of Belu Regency Government Nursing Academy 2014/2015 Academic Year. 2019;1(1):8-9.
12. Indriawati P. The Effect of Self-Confidence and Emotional Intelligence on Learning Outcomes of the Balikpapan University Faculty of Social and Political Sciences Students. *Journal of Dimensions*. 2018;7(1):59-77.
<https://Www.Journal.Unrika.Ac.Id/Index.Php/Jurnaldms/Article/Download/1633/1189>
13. Komalasari, Tresna I, Ade T. The Relationship etween Motivation to Become a Nurse and Student Achievement of AKPER YPIB Majalengka in 2017. *Journal of Nursing and Health MEDISINA AKPER YPIB Majalengka*. 2018; 4 (7): 2-3.
<http://ejournal.akperypib.ac.id/wp-content/uploads/2018/08/MEDISINA-Jurnal-Keperawatan-dan-Kesehatan-AKPER-YPIB-MajalengkaVolume-IV-Nomor-7-Februari-2018-2.pdf>

APPLICATION OF NURSING MANAGEMENT: HORAS PROGRAM TO IMPROVE COMPLIANCE PULMONARY TUBERCULOSIS MEDICATION

Reni Asmara Ariga¹, Roymond H Simamora², Siti Zahara Nasution³, Cholina Trisa Siregar⁴, Lufthiani⁵, Ikhsanuddin Ahmad Harahap⁶, Fajar Amanah Ariga⁷, Selviani Ariga⁸, Sri Budi Astuti⁹

^{1,2,3,4,5,6,7}Faculty of Nursing, Universitas Sumatera Utara

^{8,9}Public Health, Medan, Indonesia

reni.asmara.ariga@usu.ac.id

Abstract

Objective: To improve the medication of patients with pulmonary tuberculosis by setting up a nursing facility within framework of HORAS program, which stands for Health belief, Observation, Relaxation, Action, and Supporting. Method: Quasi-experimental design with a cross sectional, from 11 May to 31 July 2020 in Community Health Center Medan Johor and Medan Amplas. Samples were 52 nurses that received informed consent using total sampling technique. Pre-test and post-test with Google form that contains an overview of questionnaires for nursing management. Value of validity was 0.80 and reliability 0.87. Furthermore, ethical test was carried out by the ethics committee of Faculty of Nursing, USU. Result: The application of nursing management in treatment of pulmonary tuberculosis showed Good results 27 (51.9%), fairly 17 (32.7%), and less 8 (15.4%). Conclusion: Application of HORAS program for the treatment of pulmonary tuberculosis in Medan Johor and Medan Amplas community health center is effective.

Keywords: HORAS, Management, Nursing, Pulmonary Tuberculosis

Introduction

Pulmonary tuberculosis is a potentially serious infectious diseases that mainly affects the lungs. Furthermore, it is a contagious disease that is transmitted from one person to another, which is caused by *Mycobacterium tuberculosis* bacteria that belongs to a specie's of a strong *Bacillus* bacterium. Therefore, healing processes takes a long period of time.¹

The high incidence of pulmonary tuberculosis, especially in developing countries, remains a global concern. World Health Organization (WHO), declared this diseases as a global emergency in 1993 and reported about 10.4 million cases globally which increases from the previous figure of about 9.6 million. Indonesia was rank second with about 1.02 million cases of pulmonary tuberculosis cases after India with about 2.8 million cases, and China with 918 thousand cases.³

The causes of high rate was due to the low compliance of patient medication.⁴ One of the most important factors influencing the success of treatment was patient's compliance with taking medication⁵, which is influenced by several factors such as knowledge and attitude.⁶

Nurses are health workers that are directly related to patients, and to overcome the problem of patient compliance with medications, skills needs to improve. However, to ensure success of a business, management must be carried out based on principles, and modern management functions of planning, organizing, implementing and monitoring (evaluation).⁸

Strengthening skills of nurses in pulmonary tuberculosis control to improve drug compliance can be done by implementing nurse management in application of HORAS

program. Furthermore, HORAS means safe in Batak and in English means Health belief, Observation, Relaxation, Action, and Supporting. The meaning of HORAS here is cured, or free from pulmonary tuberculosis disease.

Health belief is an effort to strengthen people's belief that there was an attempt to avoid pulmonary TB disease. **Observation** includes assistance of Medication Ingestion Supervisor (PMO), the ability to manage medication schedules, taking medications, and independent healthy goals such that patient is expected to have the ability for self-monitoring. **Relaxation** is an effort to make patients independent, such as For example, taking TB medication calmly, controlling anger, planning activities, praying, dealing with ailments in a more relaxed manner. **Action** is a way of training patients by taking care of themselves and being obedient in taking medications and **support** to be aware of the factors that are preventing patients from taking care of themselves.

HORAS education technique is a form of nursing intervention in the community in which the training is a combination of comprehensive/holistic techniques that strengthen awareness, independence, and changes in healthy behavior for pulmonary tuberculosis patients because it is a combination of physical, psychological, social, and spiritual.

Method

This research was an experimental study with a cross sectional approach conducted from May 11 to July 31, 2020 in Medan Amplas and Medan Johor North Sumatra Community Health Center. 52 people were interviewed using a total sampling technique and pre-test and post-test with a Google form that contains an overview of questionnaires for nursing management was used. The value of validity was 0.80 and reliability 0.87.

Respondents received pre-test and a post-test that contains nursing functions, such as

planning, organizing, implementing and evaluating the treatment of pulmonary tuberculosis. Respondents were treated within the framework of HORAS program in form of nursing management. Ethical clearance No. 2166/VI/SP/2020 from Faculty of Nursing USU was obtained.

Planning

- Assessment of patients with pulmonary tuberculosis: diagnosed, relapsed due to withdrawal and drug resistance.
- Building patients trust.
- Asking the patient for further assessment
- Identify and formulating problems
- Determining the patient's strengths/weaknesses
- Developing objectives and outcome criteria

Organizing

Division of duties according to the main tasks and functions.

Implementation

a. Health Belief

- Assessment of physical, psychological, social and spiritual complaints.
- Motivating patient to accept themselves and making sure pulmonary TB can be cured.
- Providing health education using supportive media

b. Observation

- Drug Ability Observation Sheet, which includes PMO support, the ability to set a medication schedule, taking medication, and independent healthy targets.
- Encouraging patients to regularly take medication on time, training the PMO to always remind patients and always monitoring patients, and observing medications compliance through a provided treatment card provided by the community health center.
- Providing health education using posters on duties and the importance of preventing pulmonary tuberculosis for PMO.

- c. Relaxation
 - Assessing complaints such as pain and aggravating factors, signs of verbal-non verbal pain.
 - Instructing patients not to get bored while taking medications and teaching patient's and PMO by demonstrating deep breath relaxation techniques using posters.
- d. Action
 - Helping patients to change healthy behavior
 - Teaching patients and PMO to practice cough etiquette using poster media.
- e. Supporting
 - Training and motivate family/PMO in facilitating patient self-care
 - Encouraging family/PMO to support patient's diet/nutrition
 - Advising patients and PMO to consult health workers when they discovered drugs side effects.

Evaluation

Evaluation of educational HORAS techniques is basically to assess or monitor responses and continuous condition developments to determine the goals and criteria for the results obtained.

Furthermore, respondent have undergone training are then given post-test. The research was carried out by conducting an ethical test by the ethics committee of Faculty of Nursing, University of North Sumatra. Informed consent was obtained after respondents were given an explanation on the objectives of the study. The analysis was explained descriptively by univariate.

Results

Results showed that application of nursing management in Medan Johor and Medan Amplas health centers is sufficient. In planning phase it was reported that activities were not coordinated on basis of planning, but directly on working area. There is no organizational step in treatment of pulmonary tuberculosis. Training of nurses, most of whom are diplomas, leads to an ignorance of nursing

management related to the division of duties. This is in line with research which states that there is a relationship between education level and performance of nurses.⁹

Furthermore, the results showed that application of nursing management in HORAS program has an impact on management of pulmonary TB to increase compliance with taking medication.

Table 1
Distribution of Pulmonary TB Management Pretest

Management Function	Well		Enough		Not good	
	n	%	n	%	N	%
Planning	5	9.6	27	51.9	20	38.5
Organizing	8	15.4	25	48.1	19	36.5
Implementation	11	21.2	20	38.4	21	40.4
Evaluation	7	13.4	19	36.6	26	50

Table 2
Post-test distribution of pulmonary TB management

Management Function	Well		Enough		Not good	
	n	%	n	%	N	%
Planning	24	46.220	38.4	8	15.3	
Organizing	23	44.219	36.6	10	19.2	
Implementation	28	53.915	28.8	9	17.3	
Evaluation	27	51.916	30.8	9	17.3	

Knowledge are facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject line, which are important factors in shaping a person's actions, and knowledge-based behavior are more sustainable.¹⁰ Furthermore, implementation of management functions in HORAS application increases the value of pulmonary TB management in the work areas of Medan Amplas and Medan Johor health centers.

Discusstion

This research shows the effectiveness of application of nursing management in applying HORAS program in treatment of pulmonary tuberculosis in order to increase drug compliance. The research is consistent with the statement that training nurse's in care management is needed, especially planning

and monitoring functions to improve the implementation of nursing care for people with infectious diseases.¹¹

To benefit health workers, families and managers, there is a need to increase medication for patients with pulmonary tuberculosis. This is in line with research showing that patients with pulmonary tuberculosis increased physical independence after an intervention with help of health care cadres. Similarly, it is very important to increase the capacity of health professionals in the treatment of pulmonary tuberculosis.¹²

The application of HORAS program is also very useful to increase adherence to treatment in patients with pulmonary tuberculosis. This is in line with research suggesting that providing education with the proposed behavioral approach has implications for the role of healthcare professionals and can increase detection rate of BTA-positive TB.¹³

Conclusion

Application of nursing affects implementation of HORAS program for treatment of pulmonary tuberculosis in the health centers of Medan Johor and Medan Amplas. Therefore, it is necessary to implement nursing management and apply HORAS program to improve patients compliance with pulmonary TB medications.

Acknowledgement

The authors express profound gratitude to the Chancellor of the University of North Sumatra and the Head of Community Service. Our deepest appreciation also goes to all respondents that participated in the research.

References

1. Putri P, Tuti R, Zahtamal. Knowledge and Actions of TB Cadres in Efforts to Control Pulmonary Tuberculosis in Meranti Islands Regency. Student Online Journal of the Faculty of Medicine, University of Riau. 2017; 4(2):1-12. <https://media.neliti.com/media/publications/189080-ID-peng> Knowledge-dan-

- tindakan-kader-tb- dalam.pdf
2. Megawati, Syria, Rusli N, Ahmad Y. Educate TB Lung Knowledge of Posyandu Cadre Attitudes through Monopoly Simulation Games. Indonesian Health Promotion Publication Media. 2018;1(1):6. <http://jurnal.unismuhpalu.ac.id/index.php/MPPKI/article/viewFile/130/99>
3. World Health Organization. Global tuberculosis report 2015, <https://apps.who.int/iris/handle/10665/191102>; 2015 [cited 29 August 2020].
4. Ibnu AD, Irvan M, Dessy M. Case Report of Pulmonary TB Coinfection with HIV/AIDS Case Report of Pulmonary TB with HIV/AIDS Coinfection. Yarsi Medical Journal. 2020;28 (2):22-25. <http://academicjournal.yarsi.ac.id/jfky>
5. Rinto S, Aida M, Nur RH. Compliance of Pulmonary TB Patients with the Use of Pulmonary TB Drugs in Gunungjati Hospital, Cirebon City 2017. Journal of Medical Science. 2018;2(2):83. <http://doi.org/10.1234/ms.v2i2.46>
6. Dewi HW. Analysis of Factors Associated with Compliance of Advanced Stage Pulmonary Tuberculosis Patients for Taking Medicines at Integrated Hospital Hospitals in 2015. Journal of Indonesian Hospital Administration. 2015;2(1):19. <http://journal.fkm.ui.ac.id/arsi/article/view/2186/724>
7. Reni AS, Siti ZN, Rina A, Dardanila, Rika EN, Siti SN. Stakeholder Perception about Soft Skill Graduated Faculty of Nursing, University of North Sumatra. ICOSTEERR. 2018;514-518. <http://doi.org/10.5220/0010076805140518>
8. Reni AS. Textbook of Implementation of Health Service Management in Nursing. First Printing. Yogyakarta: Deepublish; 2020.
9. Hanna GK, Sefty R, Rivelino SH. Relationship of Education Level and Length of Work with Nurse Performance in Sorong District General Hospital. Nursing e-journal. 2016;4(1):6. <https://ejournal.unsrat.ac.id/index.php/jkp/article/view/11903>
10. Suhat, Ruyatul H. Factors related to active

- cadres in Posyandu activities. *Journal of Public Health*. 2014;10(1):142-143. <https://journal.unnes.ac.id/nju/index.php/kemas/article/view/3072/3118>
11. Lien N, Ajeng Y, Ari F, Arni RS. The Relationship between the Management Function of the Head of the Room and the Implementation of Nursing Care for Patients with Communicable Diseases at Telogorejo Hospital High School. *Journal of Nursing and Midwifery*. 2016;8(3):8. <http://ejournal.stikestelogorejo.ac.id/index.php/jikk/article/view/386>
 12. Khoiroh U, Meidiana D, Megah A. Support of Health Cadres for the Physical Independence of Patients with Pulmonary Tuberculosis. *Health Scientific Journal*. 2018;13(1):58. <http://journal.unusa.ac.id/index.php/jhs/article/view/571/493>
 13. Ni PS. Strengthening the Role of Health Cadres in the Discovery of Positive BTA Tuberculosis (TB) Cases through Education with the Theory Of Planned Behavior (TPB) Approach. *Prima Health Journal*. 2014;8(1):1249. <http://doi.org/10.32807/jkp.v8i1.47>

**THE EFFECT OF FOOT MASSAGE WITH KHOFANUN OIL ON ANXIETY
OF HYPERTENSION PATIENTS IN MAINI DARUL AMAN VILLAGE
WEST TEBING TINGGI DISTRICT, MERANTI ISLANDS**

Rizka Febtrina¹, Nur Syafridawati², Wardah³

1, 2, 3 School of Nursing Payung Negeri Pekanbaru
rizka.febtrina@payungnegeri.ac.id

Abstract

Objective: Hypertension causes physical and psychological complaints, one of which is anxiety. If anxiety is not overcome, it will affect blood pressure. The research aimed to determine the effect of foot massage with khofanum oil on anxiety in hypertension patients. **Method:** The research design used was a quasi-experimental, one group pre and post test using GAI (Geriatric Anxiety Inventory) questionnaire to measure the level of anxiety. Foot massage was given once a day for 3 days every morning. Data analysis used dependent t test. **Result:** The average anxiety of 30 respondents before given foot massage khofanun oil was 8.03 and after intervention was 3.53. There is effect of khofanun oil foot massage on anxiety in hypertension patients (p value = 0.000). **Conclusion:** Foot massage can be used as an independent nursing intervention to reduce anxiety in hypertension patients. Further research is needed to determine the effect of foot massage on other variables such as comfort or sleep quality.

Keywords: Foot Massage, Anxiety, Hypertension

Introduction

Hypertension is one of the most common cardiovascular diseases. It is often referred to as the silent killer because most cases of hypertension show no symptoms and go undetected until they show serious complications that can cause death¹. Hypertension is one of the main risk factors for heart attacks and strokes, which affect most of the world's population. Hypertension is a condition where blood pressure is found to be 140/90 mmHg or more for ages 13 - 50 years and blood pressure reaches 160/95 mmHg for ages over 50 years². Hypertension is a chronic disease that cannot be cured, it can only be prevented from developing through

modification of risk factors for hypertension³. Therefore hypertension is a disease that does not only affect the physics but also the psychological conditions⁴. Anxiety can also cause an increase in blood pressure and can affect concentration and alertness, and also increase health risks, and can damage the function of the immune system⁵

Anxiety can also cause an increase in blood pressure and can affect concentration and alertness, and also increase health risks, and can damage the function of the immune system⁵. During times of stress and anxiety, the body experiences hormonal imbalances. All hormones that are controlled by the brain have a balance disorder, one of which is an increase in adrenaline levels and an adrenocortical response. Stress will increase peripheral vascular resistance and cardiac output so that it will stimulate sympathetic nerve activity⁴.

Foot massage is the practice of massaging certain points on the feet. The benefits of foot massage for health are not in doubt. One of its most popular advantage is to reduce pain in the body. Other benefits include preventing various diseases, increasing endurance, helping to cope with stress, relieving migraine symptoms, helping to cure chronic diseases, and reducing dependency on drugs^{6,8}

This study aims to identify the characteristics of respondents, changes in anxiety before and after the intervention and the effect of foot massage on anxiety in hypertension patients.

Method

The research design used was a quasi-experimental design, one group pre and post test. The intervention was given in the form of a foot massage using khofanun oil for 10 minutes on each leg which was carried out for 3 days. Anxiety was measured on the first day and measured again after the intervention on the third day. The level of anxiety was assessed using the GAI (Geriatric Anxiety Inventory) to measure the level of anxiety in the elderly (20 questions).

The samples in this study were 30 hypertension patients aged ≥ 45 years and experiencing moderate to severe anxiety, with purposive sampling. The exclusion criteria in this study were patients with injuries on the feet, edema, pain in the legs, fractures or other injuries of feet. The procedure of the research is massage the soles of the feet using firm movements with the thumbs using khofanun oil, apply light to medium pressure to various pressure points on the soles of the feet, press the instep area between the thumb and forefinger using the thumbs, then hold the base of the foot with one hand, with the other fingers, pull, rotate and pull the big toe gently, moving from the outside to the inner toes, repeat 2-3 times.

The statistical test in this study was to see the difference in anxiety levels in hypertension patients before and after being given foot massage therapy using khofanun oil. The test used was the dependent t test with a confidence level $\alpha = 0.05$. This research has also been declared to have passed the health research ethics commission at the Faculty of Medicine at University of Riau (No:B/037/UN.19.5.1.1.8/UEPKK/2029).

Results

The majority of patients are in the category of elderly (60 years - 74 years) as many as 16 respondents (53.3%) and the majority of

gender are women as many as 24 respondents (80.0%).

Table 1
Distribution of Respondents by Characteristics

No	Variables	Freq	Percentage (%)
Age			
1	Middle age (45-59 y)	10	33.3
2	Elderly (60-74 y)	16	53.3
3	Old age (75-90 y)	4	13.3
Gender			
1	Female	24	80.0
2	Male	6	20.0

Table 2
The Effect of Foot Massage Using Khofanun Oil on Anxiety of hypertension patients

Anxiety	Mean	SD	SE	P value
Pre	8.03	3.023	0.552	0.000
Post	3.53	1.570	0.287	

The average of anxiety before given khofanun oil foot massage was 8.03 (the mean of pre-test) and 3.53 (the mean of post-test). The statistical test results show p value = 0.000 which means that there is an effect of foot massage using khofanun oil on anxiety in elderly hypertension in Maini Darul Aman Village, West Tebing Tinggi District, Meranti Islands.

Discussion

Foot reflexology causes deep relaxation, thereby relieving physical and spiritual fatigue because the sympathetic nervous system has decreased activity which ultimately results in a decrease in blood pressure⁹. The body condition of the elderly who have hypertension can get back to better and stable condition, but the psychological factors of the elderly are very influential in the process of handling hypertension problems⁶. Elderly experiences physical limitations too. Sometimes they experience anxiety because the various illnesses they suffer do not go away and even get worse, so that there is little hope of

recovery. Things like this ultimately cause the elderly to experience psychological disorders such as anxiety^{10,11}. The basic techniques that are often used in reflexology include: the technique of propagating the thumb, rotating the hands and feet at one point, and pressing and holding techniques. Stimulation in the form of pressure on the feet can emit waves of relaxation throughout the body¹².

According to the researchers' assumptions, with the provision of khofanun oil foot massage, the respondents relaxed, so that they could reduce the level of anxiety they experienced. Based on the obtained data, almost all respondents said that they feel soundly when they sleep at night and can also provide comfort and decreased anxiety. This is due to the fact that the action of the khofanun oil foot massage given can accelerate blood flow, seen from the results of the average value of anxiety after the pre-test category of moderate anxiety becomes the mild post-test category.

Non-pharmacological treatment is needed because it provides long-term effects and minimal side effects, among others, is the khofanun oil foot massage for elderly hypertension anxiety¹³. Foot massage khofanun oil is the practice of massaging certain points on the feet. The benefits of foot massage for health are not in doubt. One of its most popular advantage is to reduce pain in the body. Other benefits include preventing various diseases, increasing endurance, helping to deal with stress and anxiety, relieving migraine symptoms, helping to cure chronic diseases, and reducing dependency on drugs^{14,16}.

Khofanun Oil is an oil well known for its properties in Riau Province, especially in the Meranti Islands. Locals often use this oil for various complaints. The composition of khofanun oil consists of a mixture of various natural ingredients such as gotu kola leaves, laos, kencur, lemongrass, red ginger, temu kunci, temu manga, and other spices. Besides being used as a rubbing oil, khofanun oil can

also be consumed directly by drinking it. The use of oil is intended to lubricate the skin so that it will smoothen the movement during massage.

According to the researchers' assumptions, anxiety is a psychosocial disorder that can increase blood pressure. From the results of the study, there was a decrease in anxiety after giving foot massage khofanun oil which greatly influenced the anxiety level in hypertension patients. This can be seen from the 30 respondents in the pre-test category, 17 respondents (56.7%) had moderate anxiety. And the post test category of anxiety became mild as many as 26 respondents (86.7%). It can be seen that there is an effect of reducing anxiety in hypertension patients after giving khofanun oil foot massage. Reduce significant levels of anxiety and make respondents feel comfortable. Foot massage khofanun oil also has minimal side effects and has a very significant effect on reducing anxiety in people with hypertension. But it also needs to be considered and monitored while the foot massage is being carried out so that unexpected things do not happen to the respondent.

Conclusions

Foot massage can be used as an independent nursing intervention that is used to reduce anxiety in hypertension patients. Further research is needed to determine the effect of foot massage on other variables such as comfort, sleep quality and blood pressure.

Acknowledgement

Researchers highly appreciate the School of Nursing Payung Negeri Pekanbaru.

References

1. Bakris G, Ali W, Parati G. ACC/AHA Versus ESC/ESH on Hypertension Guidelines: JACC Guideline Comparison. *J Am Coll Cardiol*. 2019;73(23):3018–26.
2. Chopra HK, Ram CVS. Recent Guidelines for Hypertension: A Clarion Call for Blood Pressure Control in India. *Circ Res*. 2019;124(7):984–6.
3. Farrell M. Smeltzer & Bares Textbook of

- Medical-surgical Nursing [Internet]. Lippincott Williams & Wilkins Pty, Limited; 2016. Available from: <https://books.google.co.id/books?id=FobljwEACAAJ>
4. Johnson HM. Anxiety and Hypertension: Is There a Link? A Literature Review of the Comorbidity Relationship Between Anxiety and Hypertension. *Curr Hypertens Rep.* 2019;21(9):22–6.
 5. Jackson CA, Pathirana T, Gardiner PA. Depression, anxiety and risk of hypertension in mid-Aged women: A prospective longitudinal study. *J Hypertens.* 2016;34(10):1959–66.
 6. Elshamy K, Elsafty E. Effect of Nursing Interventions Using Foot Reflexology on Blood Pressure and Quality of Life of Hypertensive Patients at Mansoura University Hospitals: Preliminary Results. *Med J Cairo Univ* [Internet]. 2011;79(2):193–202. Available from: <http://medicaljournalofcairouniversity.net/index/images/pdf/2011/September/52.pdf>
 7. Ramu K, Natekar DS, Abraham LE, St AB, Ct RA. Effectiveness Of Foot Massage On Blood Pressure. *Int J Curr Adv Res.* 2019;8(01).
 8. Eccles AS. The effect of massage on the pulse-rate. *Br Med J.* 1895;1(1788):787.
 9. Rezky RA, Hasneli Y, Hasanah O, Studi P, Keperawatan I, Riau U. Pengaruh terapi pijat refleksi kaki terhadap tekanan darah pada penderita hipertensi primer. *JOM.* 2015;2(2).
 10. Priyanka DT, Aruna S, Gowri PM. Assess the effectiveness of Foot massage on blood pressure among patient with Hypertension in selected setting , Chennai. *Int J Multidiscip Educ Res.* 2015;4(September):2–6.
 11. Cankaya A, Sarita S. Effect of Classic Foot Massage on Vital Signs , Pain , and Nausea / Vomiting Symptoms After Laparoscopic. *Surg Laparosc Endosc Percutan Tech.* 2018;28(6):359–65.
 12. Wahyuni S. Pijat refleksi untuk kesehatan. Jakarta: Dunia Sehat; 2014.
 13. Moyle W, Cooke ML, Beattie E, Shum DHK, O'Dwyer ST, Barrett S, et al. Foot massage and physiological stress in people with dementia: A randomized controlled trial. *J Altern Complement Med.* 2014;20(4):305–11.
 14. Youssef NFA, Diab A, Dns AH. The Effect of hand and foot massage on alleviating pain and anxiety of abdominal post-operative patients at a University Hospital: A randomized control trial The Effect of hand and foot massage on alleviating pain and anxiety of abdominal post-operative. *IOSR J Nurs Heal Sci.* 2017;6(May):56–65.
 15. Oshvandi K, Abdi S, Karampourian A, Moghimbaghi A, Homayonfar S, Kh O. The effect of foot massage on quality of sleep in ischemic heart disease patients hospitalized in CCU. *Crit care Nurs.* 2014;7(2):66–73.
 16. Azhar MU, Sciences H, Massage F. Effect of Foot Massage on Decreasing Blood Pressure in Hypertension Patients in Bontomarannu Health Center. *J Heal Sci Prev.* 2019;3(December):6–10.

FORMULATION OF GEL ALOE VERA LINN (*Aloe vera Linn.*) TO PREVENT PREMATURE AGING

Safri¹, Benni Iskandar²

¹Faculty of Nursing of Universitas Riau

² Sekolah Tinggi Ilmu Farmasi (Institute of Pharmaceutical Sciences) Riau
safri@lecturer.unri.ac.id

Abstract

Objective: The study was to determine the effectiveness of aloe vera as an anti aging substance. **Sample** of this research includes volunteers over 25 years of age who regularly ride a motorcycle. **Method:** The research was conducted at the Pharmacetic Laboratory of the Sekolah Tinggi Ilmu Farmasi (STIFAR) Riau, and the Cosmetology Laboratory of the Universitas Sumatera Utara (USU). The tool allows for observation of several parameters, including moisture, evenness, pore size, and the number of spots and wrinkles. Changes in the skin conditions were measured for varying preparations, namely 0% aloe vera mucus gel (F0), 5% aloe vera mucus gel (F2) and 15% aloe vera mucus gel (F3) on the 7th, 15th, and 30th day of applying the preparations. Statistically analyzed using two-way ANOVA (analysis of variance). The Tukey test was then conducted to see the difference. Skin analyzer is a tool used for analyzing various skin conditions. **Result:** The study found that a gel with 15% concentration of aloe vera mucus gel (F2) produced faster results in increasing moisture and skin evenness, shrinking pore size, and reducing spots and wrinkles after 4 weeks of application. **Conclusion:** The study concludes that it is safe to use aloe vera linn for preventing premature aging.

Keywords: Aging, Anti-Aging, Aloe Vera, Mucous, Gel

Introduction

Skin is a human's outermost organ that shields internal organs from the human environment. The area of an adult's skin is about 1.5 square meters, and it accounts for about 15% of overall body weight. It is an essential organ that reflects one's state of health. It is also an elastic, sensitive, and incredibly complex organ. Human skin varies with climate, age, sex, race, and even different parts of the body¹.

Skin aging is caused by both intrinsic and extrinsic factors. The intrinsic factors that cause premature aging include increasing exposure to free radicals and DNA damage. On the other hand, UV rays and smoking are two important external factors that lead to premature aging. Of all these factors, free radicals are believed to be the primary cause of premature aging. A free radical is an atom or molecule that is highly reactive with unpaired electrons. In the skin, excessive free radicals damage the collagen in the skin cell membranes, rendering the skin less elastic and

thus developing wrinkles^{2,3}. Efforts have been made to prevent aging or reduce its effects. The use of antioxidants is one of the most common efforts to prevent aging⁴. A plant that is rich in antioxidants is aloe vera (*Aloe vera Linn.*). Aloe vera contains nutrients that the body needs in a sufficient amount. Some of these vitamin and mineral elements such as vitamin C, vitamin E, vitamin A, magnesium, and zinc, function as natural antioxidants. These antioxidants are useful for preventing premature aging⁵.

Salawu et al. (2017) discovered that aloe vera mucus has an IC₅₀ value of 41.48 ppm, and the preliminary test results that we have conducted show an IC₅₀ result of 541.0985 ppm (categorically strong)⁷.

Based on the above background, this study sought to find out whether the aloe vera gel preparation can be used as an anti-aging

substance, for which several anti-aging test parameters were conducted, including moisture, evenness, pores, spots, and wrinkles using a skin analyzer (Aramo Huvis) Huvis). Meanwhile, the purpose of this study was to obtain an optimum preparation of aloe vera mucus gel and to test its anti-aging activity using a skin analyzer.

Method

This study used aloe vera leaf mucus, which is thick and clear and has a distinctive smell. Aloe vera leaves were washed under running water and cut into two parts. The mucus of the leaves was then extracted, resulting in liquid with a lot of foam. It was then stored in the refrigerator for 15 minutes, after which sodium metabisulfite was added into the liquid. The mixture was heated at a temperature of 30-40°C for 15 minutes to activate the enzymes contained in the aloe vera mucus¹.

The next process was formulating the aloe vera gel preparation by using several additives intended to maintain the stability of the gel preparation. All active ingredients and additives used had been subjected to preliminary tests and considered to meet standard requirements set out in the 3rd and 4th editions of the Indonesian Pharmacopoeia book.

Table 1 outlines all ingredients used for the preparation. As much as ± 35 ml of water went through a distillation process in that it was heated to a temperature of ± 80° C, Once the heating was finished, HPMC was mixed with it for 15 minutes, followed by the addition of aloe vera mucus that had been previously mixed with sodium metabisulfite. Propylene glycol was then gradually added to the mixture and stirred until it became homogeneous. Once the gel preparation was ready, we conducted stability testing, including organoleptic test, dispersion test, adhesion test, homogeneity test, and stability tests. After all of the tests were carried out, the aloe vera gel preparation was declared to meet the requirements set in the Indonesian Pharmacopoeia¹⁰.

**Table 1
Formulation Table**

Material	Formula (%)			Function
	1	2	3	
Mucus of aloe vera leaf	0	5	15	Active substance
HPMC	3.5	3.5	3.5	Gelling agent
Natrium metabisulfite	0	0.5	0.5	Antioxidants
Propylene Glycol	18	18	18	Preservatives, humectants, and penetration accelerator
Aquadest	ad 100	ad 100	ad 100	for water stage

The sample of this research includes volunteers over 25 years of age who regularly ride a motorcycle. An anti-aging activity test was carried out on 3 volunteers. The initial condition of the skin of each volunteer was firstly analyzed using a skin analyzer, including moisture content, evenness, pore size, and the number of spots and wrinkles. A skin analyzer is a tool used for analyzing skin's health condition. The initial analysis was conducted on the backside of the volunteers' hands. After the initial analysis, the volunteers applied each preparation (gel) evenly to the back of their hands. The preparation was applied on their hands 2 times a day for 4 weeks: in the morning before they commence activities outside and at night before they have a rest. Changes in the skin condition were measured using a skin analyzer for a different amount of aloe vera mucus gel in the preparation, namely 0% (F0), 5% (F2), and 15% (F3) on the 7th, then 15th, and the 30th day of their application.

Results

Figure 1
Percentage of the Respondents' Skin Moisture

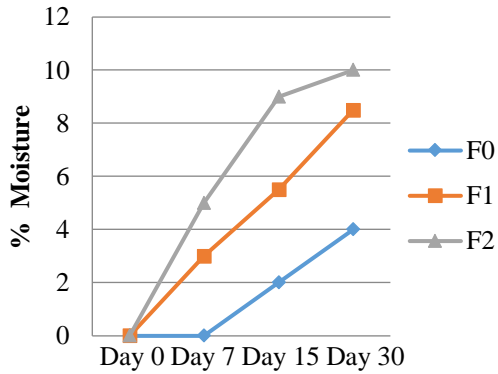


Figure 2
Percentage of the Respondents' Skin Evenness

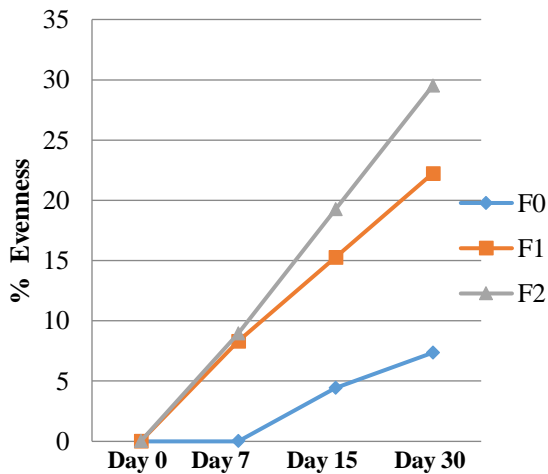


Figure 3
Percentage of the Respondents' Skin Pore

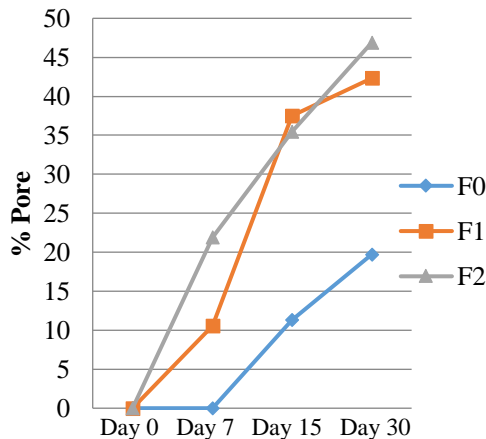


Figure 4
Percentage of the Respondents' Skin Spot

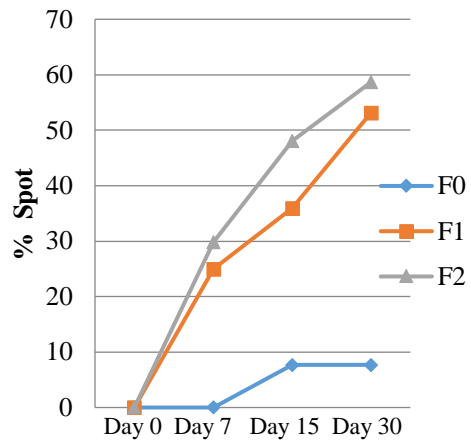
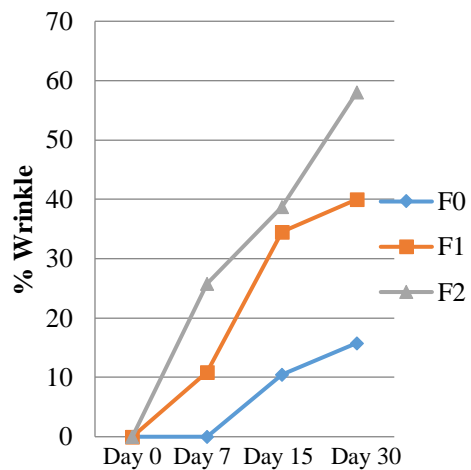


Figure 5
Percentage of the Respondents' Skin Wrinkle



Discussion

After an initial evaluation, the gel preparation with the aloe vera mucus and the gel without fulfilling the requirements of the gel preparation. After that, examination of skin irritation was carried out on three panelists (2 women and 1 man) with a closed patch test. The test was performed to see whether the aloe vera mucus gel preparation potentially brings about skin irritation. To do the test, 0.1 gram of the gel preparation was applied to the inner, upper part of arms with a diameter of 2 cm for 24 hours. The parts of the arms were then covered with plaster. Results of the examination indicated no primary and secondary irritation to the panelists, both men

and women, so the preparation was deemed safe for use¹.

Results of ANOVA test showed a significant difference ($p < 0.05$) in the percentage of pore size recovery on two variables (concentration and time). The results of the Tukey test on the effect of different concentrations of aloe vera mucus gel on the pore size showed that the effect of the formula without any aloe vera mucus gel (F0) was significantly different ($p < 0.05$) from that of F1 and F2. There was no significant difference ($p > 0.05$) between the effect of F1 and that of F2 on pore size, but the effect of F1 was significantly different ($p < 0.05$) compared to that produced by F0. Similarly, the effect of F2 was significantly different ($p < 0.05$) when measured against that of F0. With regards to the variable of time, the results of the Tukey test suggested significant change ($p < 0.05$) in pore size between day 0 on the 7th day, the 15th day, and the 30th day. The effect of the gel preparation on the pore size was significantly different ($p < 0.05$) between the 7th day of application and the day before the preparation was used, and between the 7th day and the 30th day; however, the difference between the effect on the 7th day and that on the 15th day was not significant ($p > 0.05$).

When compared against the pore size before the application of the preparation, the effect of the preparation on the 15th day was different significantly ($p < 0.05$), but it was not the case with the effect between the 15th day and the 7th day and the 15th day and the 30th day. Similarly, the effect of using the gel preparation on pore size on the 30th day was different significantly in comparison to the effect before using the preparation and the effect on the 7th day, but was not significantly different to that on the 15th day.

Like previous measurements, measurement of wrinkles was conducted using a skin analyzer but with 10x magnification lens and a blue sensor light. Before applying the preparation, the vast majority of volunteers' skin demonstrated notable amount of wrinkles (20-

52) on the back of their hands. However, after initial use of the preparation without any concentration of aloe vera mucus gel (F0), the amount of wrinkles was minimal (0-19). After 30 days of use, the amount of wrinkles on the backs of the volunteers' hands significantly dropped to the extent that no wrinkles were identified. After a week of their applications, each formula of preparation with some concentration of aloe vera mucus was able to reduce the amount of wrinkles. F1 reduced wrinkles by 10.91%, while F2 by 25.81%. The formula without aloe vera mucus (F0), however, did not produce noticeable improvement on wrinkles on the 7th day. Improvement was only seen after the 15th day where F0 reduced wrinkles by 10.53%. After 30 days of application, all formulas were found to produce significant results. F0 reduced wrinkles by 15.79%, F1 by 40.00%, and F2 by 58.06%. Results of ANOVA test also suggested a significant difference ($p < 0.05$) in the percentage of reduced wrinkles as a result of the aloe vera mucus concentration in the preparation and the time of application. Results of the Tukey test on the time variable showed a significant difference ($p < 0.05$) between the amount of wrinkles on day 0 and that on day 7, day 15, and day 30.

Evaluation of physical stability and anti-aging activity after applying the three formulas of preparation showed that F2 produced the best physical stability and anti-aging activity compared to that of F1 and F0, which was noticeable from the results of the gel adhesion evaluation test (F2 produced the longest adhesion). The longer the gel preparation was in contact with the skin, the more active substances penetrate into the skin, resulting in a more optimal therapeutic effect.

Conclusion

The study concludes that the formula producing better anti-aging activity on the skin was F2 with a concentration of 15% aloe vera mucus compared to F0 (0%) and F1 (5%). It was proven by the highest percentages of recovery in the volunteers' skin condition for all parameters of evaluation (moisture content,

evenness, pores, spots and wrinkles). Statistical analyses proved that F2 produced significantly different ($p < 0.05$) recovery, when compared to F0 and F1, did throughout the 30 days of observation. The physical stability test of the three formulas showed that the use of F2 produced the best physical stability when compared with F0 and F1.

Acknowledgement

The authors would like to thank the Ministry of Education and Culture for funding this research through Penelitian Dosen Pemula (PDP) 2020 grant. Thank you to the Faculty of Nursing, Universitas Riau and Sekolah Tinggi Ilmu Farmasi Riau (STIFAR) for constant support to this research.

References

1. Anonim. Formularium Kosmetika Indonesia. Jakarta: Departemen Kesehatan Republik Indonesia; 1985.
2. Wasitaatmadja, S. M. 2002. Anatomi Kulit. Ilmu Penyakit Kulit dan Kelamin, 3-5. Jakarta: Gramedia.
3. Kammeyer A, Luiten RM. 2015. Oxidation events and skin aging. Aging research review. Vol 21 pp 16-29
4. Winarsi H. 2007. Antioksidan Alami dan Radikal Bebas: Potensi dan aplikasi dalam kesehatan. Yogyakarta: Kanisius. 22-23
5. Ardhie, M.A. 2011. Radikal Bebas dan Peran Antioksidan dalam Mencegah Penuaan. Jakarta: Scientific Journal Of Pharmaceutical Development and Medical Application. 24(1): 4-9.
6. Furnawanti, 2002. Khasiat dan Manfaat Lidah Buaya. Jakarta: Agromedia Pustaka
7. Kim, D, K, Lee, K, W., Lee, H, J., and Lee, C, Y., 2002 Vitamin C Equivalent Antioxidant capacity (VCEAC) of Phenolic Phytochemicals, J. Agric. Food Chem;51:3713-3717
8. Salawu, K. M., Ajaiyeoba, E. O., Oluyemisi, O., Adeniji, J. A., & Faleye, T. C. 2017. Antioxidant, Brine Shrimp Lethality, and Antiproliferative Properties of Gel and Leaf Extracts of Aloe schweinfurthii and Aloe vera Antioxidant, Brine Shrimp Lethality , and Antiproliferative and Aloe vera. Journal of Herbs, Spices & Medicinal Plants, 00(00), 1–9.
9. Voight, R. Buku Pengantar Teknologi Farmasi. Terjemahan Soedani, N. Edisi V. Yogyakarta: Universitas Gadjah Mada Press; 1994

EARLY DETECTION OF ANEMIA IN PREGNANCY BY “HELILI” METHOD FOR STUNTING PREVENTION

Sri Utami¹, Erika²

Faculty of Nursing Universitas Riau, Pekanbaru, Indonesia
t4m1_psik@yahoo.co.id

Abstract

Objective: Anemia in pregnancy is the cause of high maternal mortality during childbirth. Mothers with anemia suffer from blood deficiency that can cause various problems not only to the mother but also the baby. The health issue may also help children to develop stunting, which may result in the failure to develop in normally. **Method:** This study attempt to propose early detection of anemia in pregnancy by using “HELILI” method in order to prevent stunting. It employed observational analytics with cross-sectional survey design. Using total sampling technique, the research was conducted in the Rumbai Pesisir Public Health Center with a sample of 40 respondents. **Results:** The study found some interesting results. About 25% of pregnant women were found to have mild anemia. It was also found that 45% of the samples had waist and pelvic circumference (Waist and Hip ratio) below 80 cm and 54% of the pregnant women had a normal Body Time Index. Moreover, no less than 10% of pregnant women had LILA (Upper Arm Circumference) below 23.5. Lastly, 20% of the women averaged less than 145 cm in height. **Conclusion:** pregnant women suffering from anemia showed a low waist and hip ratio, which may result in a less normal upper arm circumference (LILA). The state of anemia in pregnant women also affects the absence of less than normal height. **Conclusion:** this study can be used as a reference to predict the absence of anemia in pregnancy, so anemia in pregnant women can be identified and followed up as quickly as possible. In addition, the incidence of stunting can be detected as early as possible.

Keywords: Anemia, HELILI, Pregnant Women, Stunting

Introduction

Maternal, infant and toddler pain and death rates are indicators of a nation's health status. The presentation of the highest Maternal Mortality Rate due to bleeding, can lead to anemia, infection and Chronic Energy Deficiency.

Anemia is one of the most common and widespread global health problems affecting 56 million women worldwide, and two-thirds of them are in Asia¹.

Maternal anemia is a serious concern because its impact on both mother and fetus contributes to maternal death and even prolonged baby and child pain¹. Anemia in women of childbearing age, especially pregnant women, is a concern

of the WHO (World Health Organization). So serious is this issue that WHO aims to reduce its figure by 50% by 2025.

The problem of stunting (failing to grow or dwarf) in Indonesia is still a shared concern. Basic Health Research conducted in 2013 recorded a national stunting prevalence of 37.2 percent, up from the figure found in 2010 (35.6%) and in 2007 (36.8%). According to data from Health Research in 2018, the incidence of stunting in Indonesia reached 30.8%.

In other words, about 8.9 million Indonesian children suffer from stunting, meaning that it impacts at least one in three children in Indonesia. The number is higher than that in other Southeast Asian countries such as

Myanmar (35%), Vietnam (23%), and Thailand (16%). Indonesia ranks fifth in the world for the number of children with stunting conditions. The problem of stunting (failing to grow or dwarf) in Indonesia is still a shared concern. Basic Health Research conducted in 2013 recorded a national stunting prevalence of 37.2 percent, up from the figure found in 2010 (35.6%) and 2007 (36.8%). According to data from Health Research in 2018, the incidence of stunting in Indonesia reached 30.8%².

In other words, about 8.9 million Indonesian children suffer from stunting, which means that for every three children, at least one is affected. The number is higher than that in other Southeast Asian countries such as Myanmar (35%), Vietnam (23%), and Thailand (16%). Indonesia ranks fifth in the world for the number of children with stunting conditions. The problem of stunting (failing to grow or dwarf) in Indonesia is still a shared concern. Basic Health Research conducted in 2013 recorded a national stunting prevalence of 37.2 percent, up from the figure found in 2010 (35.6%) and 2007 (36.8%).

That is, the maximum growth is suffered by about 8.9 million Indonesian children, or one in three Indonesian children. The prevalence of stunting in Indonesia is higher than in other countries in Southeast Asia, such as Myanmar (35%), Vietnam (23%), and Thailand (16%). Indonesia is ranked fifth in the world for the number of children with stunting conditions. More than a third of children under the age of five in Indonesia are above average

Method

The study employed observational analytics with cross-sectional survey design to determine the prevalence of pregnant women. A total of 40 first trimester pregnant women were admitted to the study in 2020. The research was conducted in the Rumbai Pesisir Public Health Center with sample of 40 respondents (total sampling technique)

Results

Table 2

Interpretation of Haemoglobin

	Frequency (n)	Percentage (%)
> 11 gr %	30	75
9-10 gr/dl	10	25

The results showed that the number of mothers detected to have mild anemia was 10 (25 %)

Table 2

Interpretation of waist to hip ratio

	Frequency (n)	Percentage (%)
< 80 cm	18	45
> 80 cm	22	55

The results showed that 18 mothers (45 %) were detected to have waist to hip ratio < 80 cm

Table 3.

Interpretation of Body Mass Index

Classification	Frequency (n)	Percentage (%)
Less	< 18.5	-
Normal	18.5-25.0	54
Overweight	25.1- 27	31
Obesity	>30	15

The results showed that 45 mothers (54 %) had the body mass index of normal mothers

Table 4

Interpretation of Upper Arm Circumference

Classification	Frequency (n)	Percentage (%)
Upper Arm Circumference ≥ 23,5	36	90
Upper Arm Circumference < 23,5	4	10

The study found that 4 mothers (10%) had the size of upper arm circumference below 23.5 cm

Table 5
Interpretation of Height

	Classification	Frequency (n)	Percentage (%)
Height	>146 cm	32	80%
Height	≤145 cm	8	20%

The results showed that only 8 mothers (20%) had height less than 145cm

Discussion

1. Haemoglobin

The study discovered that about 25% of the pregnant women have mild anemia. Major maternal complications directly related to anemia are not common in women with a hemoglobin level greater than 6 gr/dl^{1,3,4}. According a research there were 13 pregnant women (32.5%) at the Bahu Health Center, out of total sample, identified to have low level of Hemoglobin⁵. Hemoglobin levels of pregnant women are influenced by adherence to taking Sulfas Ferosis, age, parity. So, it is advisable for pregnant women to be more compliant in taking Sulfas Ferosis tablets and knowing a good age to conceive and the ideal number of births in order to prevent anemia⁶.

2. Interpretation of waist to hip ratio

It is found that 45% of pregnant women had waist and pelvic circumference (Waist and Hip ratio) which is higher than 80 cm.

3. Body Mass Index

The results of the study suggested that the normal Body Time Index of pregnant women was 54%. Waist circumference predicts obesity-related adverse pregnancy outcomes as well as BMI

4. Upper Arm Circumference

The results showed that only about 10% of Pregnant women had Upper Arm Circumference below 23.5 The Upper Arm Circumference threshold in women of childbearing age who are not at risk of Chronic Energy Deficiency is 23.5 cm which means that the pregnant women with Upper Arm Circumference below 23.5 cm will be at risk of chronic lack of energy. Anemia suffered by the pregnant women suffering from anemia causes a lack of

blood supply in the placenta, which will affect the function of the placenta to the fetus. During pregnancy, mothers experience physiological changes that leads to imbalance. The amount of blood plasma and red blood cells can be seen in the form of decreased hemoglobin levels. This condition will affect oxygen to the uterus and interfere with intranutrient conditions, especially fetal growth, which will affect the fetus born with low birth weight.

5. Height

The results of the study suggested that about 20% of pregnant women had height less than 145 cm. A study explains⁷ that maternal height has a significant impact on the neonatal size, i.e. short mothers (height of less than 145 cm), on average (146-155 cm) have 2.74 and 9.0 times greater risk for giving birth to have low birth weight babies than mothers with normal height. In accordance from the height of the pregnant woman of short stature (height of ≤ 145 cm), in the aid of childbirth performed sectio caesaria surgery as much as 41 (93.18%), and 2 (4.55%) maternity aid mothers on a pervaginam⁸

Conclusion

The pregnant women detected to suffer from anemia were found to have a low waist and hip ratio, which may result in a less normal upper arm circumference. Anemia in pregnant women also affects the absence of less than normal height. Results of this study can be used as a reference to predict the absence of anemia in pregnancy, so anemia in pregnant women can be identified and followed up as quickly as possible. In addition, the incidence of stunting can be identified as early as possible.

Acknowledgment

Authors would like to thank the Universitas Riau for supporting this work through SUEDNDPJTl-Ut 2020.

References

1. WHO (Ed.) (2012). Maternal, infant and young child nutrition. (WHO, Ed.). Geneva, Switzerland: The sixty-fifth world health assembly WHA65.6. [Google Scholar]
2. Utami S, Misrawati, Yulia ID Early Detection of Nutritional Status of Anemia Pregnant Women with LILA (Upper Arm Circle), Publish International Conference (Proceeding), 2017
3. Beal, T., Tumilowicz, A., Sutrisna, A., Izwardy, D., & Neufeld, L. M. (2018). A review of child stunting determinants in Indonesia. *Maternal & child nutrition*, 14(4), e12617.
4. Semba, R. D., de Pee, S., Sun, K., Sari, M., Akhter, N., & Bloem, M. W. (2008). Effect of parental formal education on risk of child stunting in Indonesia and Bangladesh: a cross-sectional study. *The lancet*, 371(9609), 322-328.
5. Lantu, A. F., Tendean, H. M., & Suparman, E. (2016). Kadar Hemoglobin (Hb) Ibu Hamil di Puskesmas Bahu Manado. *e-CliniC*, 4(1)
6. Oktaviani I, Makalew L, Solang S, (2016) Profil Haemoglobin Pada Ibu Hamil Dilihat Dari Beberapa Faktor Pendukung <https://media.neliti.com/media/publications/90985-ID-profil-haemoglobin-pada-ibu-hamil-diliha.pdf>, diakses Oktober 2020
7. Bisai S, (2003), Maternal Height As An Independent Risk Factor For Neonatal Size Among Adolescent Bengalees In Kolkata, India. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3275843/pdf/EJHS2003-0153.pdf>
8. Polsky, S., Giordano, D., Voelmle, M. K., Garcetti, R., & Garg, S. K. (2016). Using technology to advance type 1 diabetes care among women during the reproductive years and in pregnancy. *Postgraduate medicine*, 128(4), 418-426

NURSING STUDENTS' PERSPECTIVES ON THE IMPLEMENTATION OF CLINICAL TEACHING IN CLINICAL PLACEMENT

Veny Elita¹, Riri Novayelinda²
^{1,2} Faculty of Nursing, Universitas Riau
veny.elita54@gmail.com

Abstract

Objective: The purpose of this study is to describe the perceptions of nursing students about the implementation of clinical teaching in clinical placement. **Method:** This research was conducted with a descriptive approach. The questionnaire used was adapted from the Clinical Learning Environment, Supervision and Nurse Teacher evaluation scale developed and validated by Saarikoski, et.al. Data were collected among 49 nursing students from Faculty of Nursing, University of Riau, which consist of 27 students who just finished their clinical practice in Pediatric Nursing and 22 students in Psychiatric nursing. Data analysis was performed using univariate analysis. **Result:** The results of this study indicate that the majority of respondents have positive perception about the clinical practice with the highest scored is on clinical competency achievement for both nursing areas. **Conclusion:** It is suggested to faculty leaders to coordinate with practice field leaders in order to improve the clinical learning environment for nursing students.

Keywords: Clinical Practice, Nursing Profession, Nursing Students, Perspective

Introduction

Nursing education is closely related to clinical theory and learning. The clinical practice component in nursing education is an important part of the curriculum and occupies more than half of the curriculum¹. The clinical placement for nursing students during clinical practice stage aims to provide the real learning experience where students directly face patients and clinical situations and apply the knowledge they have learned. During this phase, students are expected to develop their abilities and achieve nurse competencies.

Factors that influence clinical learning include the physical environment, the number of staff, the level of patient dependence, the role of students in the learning process, the quality of clinical supervision and the opportunities available for learning². Therefore, it can be concluded that the success in the clinical learning process is largely determined by the clinical learning environment. According to Zakaria and Gheith¹, the clinical learning environment provide an interactive network of

forces in a clinical setting that affects student clinical learning outcomes.

In order to achieve the quality of clinical learning, the clinical learning environment should be conducive and effective. Evaluation of the clinical learning environment needs to be done to find out what elements have been met and which should be improved.

Since the beginning of the nursing profession degree in the Faculty of Nursing, Universitas Riau in 2005, the evaluation of clinical practice has never been conducted. The informal evaluation has only been carried out between academic supervisors and students or between academic advisors and clinical instructors.

Based on the interviews with academic supervisors and clinical instructors, they found that some of the nursing students showed unsatisfactory results in the evaluation of their clinical performance, they lack of knowledge and skill. For example, they could not answer questions related to patient cases, they were

unable to determine patients' states and predict and cope with the problems that may occur during nursing care. Therefore, it is necessary to carry out a research about students' perception of the clinical learning environment for students who are undergoing a nurse professional practice to improve the quality of students in clinical learning.

The purpose of this research is to Identify four dimensions of students satisfaction consisting of: pedagogical environment (clinical learning environment), the relationship with supervisor, the role of academic supervisor and the achievement of clinical competency.

Method

This study uses a descriptive method with a survey approach. The samples were 49 students of the Faculty of Nursing Universitas Riau were assigned to the clinical professional program. The sample was taken using purposive sampling technique. The questionnaire used in this study was modified from the Clinical Environment, Supervision and Nurse Teacher (CLES + T) questionnaire developed and validated by Saarikoski, et.al⁽³⁾. At CLES + T, student satisfaction originally asses five aspects: the pedagogical environment, the supervisory relationship of the clinical supervisor, the leadership style, premises of nursing on the ward and the role of the nurse teacher. This study only used 3 aspects: clinical learning environment, the supervisory relationship and the role of nurse teacher. One aspect was added which is student opinions about competencies obtained during professional practice and role of clinical supervisor.

Results

A. Demographics Categories

Table 1
Distribution of Respondents Across Demographics

No	Category	Characteristics	n	%
1	Age	22	7	14.3
		23	39	79.6
		24	1	2
		25	1	2

No	Category	Characteristics	n	%
2	Gender	40	1	2
		Male	8	16.3
3	Program	Female	41	83.7
		A	48	98
3	Area of Clinical Placement	B	1	2
		Pediatric	27	55.1
		Nursing	22	44.9
		Psychiatric		

Demographic data on table 1 shows that respondents were in the aged range 22 - 40 years with the most of respondents (79.6%) are aged 23 years, the majority of respondents were female (83.7%), the majority of respondents were students of program A (98%) and more than half of the respondents (55.1%) undergoing the last clinical practice in the area of the pediatric and psychiatric nursing profession

B. Number of Nurse Teacher visit

Table 2.
Frequency of Nurse teacher visit during clinical placement

Frequency of visit	Area of Nursing Practice			
	Pediatric		Psychiatric	
	n	%	n	%
1-2 times	10	37	2	9.1
3-4 times	13	48.1	11	50
More than 4 times	4	14.8	9	40.9
Total	27		22	

From table 2, it can be seen that most of the respondents in the Pediatric and Psychiatric nursing areas stated that the amount of nurse teacher visit was 3 to 4 times during their clinical placement.

C. Student Perceptions about the Implementation of Clinical Learning

Data from table 3 reveals that in the pediatric nursing profession area, most respondents have a positive view of their clinical learning for all dimensions with the highest score is for achievement of clinical competency.

Pediatric Nursing Area

Table 3
Students Nursing Perception of Clinical Learning in The Area of Pediatric Nursing

Dimension Of Clinical Learning	Students Perception	Excellent		Good	
		n	%	N	%
Clinical learning environment		15	55.6	12	44.4
The supervisory relationship		15	55.6	12	44.4
The role of nurse teacher		19	70.4	8	29.6
Achievement of clinical competency		24	88.9	3	11.1

Psychiatric Nursing Area

Table 4
Students Nursing Perception of Clinical Learning in The Area of Psychiatric Nursing

Dimension Of Clinical Learning	Students Perception	Excellent		Good		Average	
		n	%	n	%	n	%
Clinical learning environment		11	50	9	40.9	2	9.1
The supervisory relationship		19	86.4	3	13.6	0	0
The role of nurse teacher		19	86.4	3	13.6	0	0
Achievement of clinical competency		21	95.5	1	4.5	0	0

Table 4 indicates that in the psychiatric nursing profession area, most of the respondents had very good perceptions for all dimensions of clinical learning with the greatest number in the clinical competency dimension was felt excellent by 21 people (95.5%). However, there were a small proportion of respondents (9,1%) who moderately satisfy with clinical learning environment.

Discussion

Based on the results, it can be seen that the majority of the respondents were > 22 years old. In accordance with the research of Lovric⁴

which states that the age of students who are practicing in the hospital is mostly between 18-25 years. At that age, individual have a tendency to have many hopes and desires. Related to gender, the result showed that 98% of the students were female. This is because nursing is still a profession that is largely dominated by women. This is probably based on the fact that women is commonly are friendly, patient, gentle, and affectionate which is very synonymous with the profession as a nurse.

Based on the number of nurse teacher visits, it was found that the majority of respondents stated that the supervisor made 3 to 4 visits or even more during clinical placement, meaning that the amount of guidance provided was adequate as expected. A good tutor needs to possess positive personality traits. The personality of a lecturer plays an important role in the preparation of students⁵

The results of the study on the Clinical Learning Environment showed that two aspects were considered very good by students including students feeling comfortable starting the practice and a meaningful learning situation for students.

The second dimension was the supervisory relationship, the results showed that in general students gave very good perceptions for the eight aspects assessed, which are the positive attitude of clinical supervisors in clinical teaching, accept suggestions from students, students were satisfied with the guidance provided, teacher do not discriminate among students, teachers meet learning needs, clinical supervisor facilitate two-way communication, there is a relationship of mutual respect and trust with students. Only one aspect that gets a score below 80% which is related to the guidance given individually.

Students' perceptions of the implementation of learning in the Nurse profession practiced by lecturers and preceptors in the clinical area are mostly in the good category, possibly because based on student experience the tasks given by

the clinical supervisor are very helpful in achieving the expected competencies in nursing, clinical supervisors show positive behavior in providing guidance.

A study by Mosaumi in Iran proved that the level of student satisfaction with clinical guidance will affect their motivation in the field of practice⁶ and this is supported by another study conducted by Purwani⁷ in Surakarta, Indonesia which explains that there is a significant relationship between perceptions of clinical guidance and learning motivation of students. A good student perception of the role of clinical educator guidance or clinical preceptors will have an impact on increasing student learning motivation in mastering competency skills in practical fields, so that knowledge will increase⁸.

The majority of students' perceptions of the role of nurse teacher were excellent. The majority of students feel satisfaction with the guidance carried out by nurse teacher and preceptors. One of the causes of this satisfaction factor is that clinical educators can provide examples of the application of basic knowledge learned in clinical problems⁹

Furthermore, the results of research related to student perceptions about the achievement of clinical competence show that all aspects are considered excellent, including getting guidance according to the required competencies, the assignments given are very helpful in achieving competence, at the end of the practice students can achieve 80% of the expected competencies and practice exam material is as expected.

Based on the nursing area, for clinical practice in the Pediatric Nursing area, most students rated it excellent and good for the four dimensions of clinical learning. Whereas in the Psychiatric Nursing area, the clinical learning environment dimension was considered average by 2 students (9.1%).

The clinical exposure and students preparation in the clinical settings is one of the important factors affecting the quality of clinical education because the optimal clinical learning environment will give a positive impact on students' professional development. A poor learning environment can be devastated for the students' professional development process. The unpredictable nature of the clinical training environment can create several problems for nursing students. Therefore, nursing lecturers must ensure that the clinical area used is ideal for learning.

Conclusion

In general, most students have positive perceptions regarding the implementation of clinical teaching for nursing profession at the Faculty of Nursing, Universitas Riau. Almost all dimensions in the clinical learning environment were considered excellent and good, only a small proportion students gave average score for clinical learning environment in the area of psychiatric nursing.

Acknowledgement

The authors appreciate University of Riau for financially supporting this research.

References

1. Zakaria, A.M., & Gheith, N.A. Measurement of effectiveness of clinical learning environment for nursing faculty students at Mansoura University, Egypt. *IOSR Journal of nursing and health science (IOSR-JNHS)* 2015 vol. 4 (3).
2. French & Mc. Kenna. *Workplace Teaching and Learning*. Unit Book Education in Nursing and Midwifery. Victoria: Monash University. 2008
3. Papastavrou, E, Dimitriadou, M, Tsangari, H, Andreou, C. Nursing students' satisfaction of the clinical learning environment: a research study. *BMC Nursing*. 2016; 15:44. <https://bmcnurs.biomedcentral.com/articles/10.1186/s12912-016-0164-4>
4. Lovric, R. Specificities And Differences In Nursing Students' Perceptionsof Nursing Clinical Faculties' Competences. University

- of Osijek. Journal of Professional Nursing. 2013.
5. Koy.V. Perceptions of nursing students on effective clinical preceptor in Pnomp Penh National Hospital, Cambodia. International Journal of Research in Medical Sciences. 2015. Jul: 3 (7):1605-1610. <https://www.msjonline.org/index.php/ijrms/article/view/1562>
 6. Sharif F. A. Qualitative study of nursing students' experiences of clinical practice. J Med Educ. 2005 ;7 No.1.
 7. Purwani Pembimbingan Klinik Dan Motivasi Belajar Praktik. Skripsi tidak dipublikasikan. 2010
 8. Neupane, N, Pandey,N, Sah, S.K. Perception of Clinical Learning Environment among Nursing Students. International Journal of Advanced Microbiology and Health Research. 2 (1):36-41. March 2018.
 9. Azizah, L.K. & Ropyanto, C.B (2012). Kedokteran F, Kedokteran F. Online di : <http://ejournal-s1.undip.ac.id/index.php/jnursing> Tingkat Kepuasan Bimbingan Klinik Mahasiswa. 2012;1:219–24.

OVERVIEW OF THE IMPLEMENTATION OF PATIENT SAFETY IN INDRAMAYU

Wiwinnuraeni¹, Bambang Eryanto², Bestina Nindy Virgiani³

^{1,2,3} School of Nursing, STIKes Indramayu
wiwinnuraeni505@gmail.com

Abstract

Objective: The purpose of this study was know the implementation of patient safety in Indramayu. **Method :** The research method was descriptive study. The population was 223 nurses who work in hospital at inpatient rooms. Sampling in this study was taken by accidental sampling technique. The instrument used a questionnaire sheet with 30 statements. Data were analyzed by using frequency distribution and percentage. **Result:** The result showed that the implementation of patient safety in the good category was 57.4% (128 respondents) and the bad category was 42.6% (95 respondents). **Conclusion:** The implementation of patient safety in Indramayu has not been fully implemented. Assistance and awards are needed to be able to improve the implementation of patient safety to increase the quality of care.

Keywords : Implementation, Patient Safety, Quality of Care

Introduction

Patient safety is a global health priority. The countries that are members of the WHO presented a statement at WHA72 which emphasized the importance of patient safety in providing health and the importance of the government to prioritize patient safety as the top¹.

In developed countries, many patients are disadvantaged during health care, either by permanent injury, increased length of stay in health care facilities, or even death. In the UK, one adverse event reported in a patient is reported every 35 seconds. Likewise in low- and middle-income countries, a weak safety culture poses a high risk of an increase in the number of unwanted events. It is reported that about 1 in 10 patients hospitalized experience an adverse event. It is estimated that 421 million hospitalizations occur worldwide each year, and approximately 42.7 million adverse events occur to patients during hospitalization. About two-thirds are in low- and middle-income countries².

Law No. 44 of 2009 concerning hospitals states that the hospital management arrangement aims to provide protection for patient safety, the hospital environment and human resources in the hospital. In line with Article 13 that every health worker working in a hospital must respect patient rights and prioritize patient safety. It is in Article 43 that a hospital is obliged to apply patient safety standards.³

Method

This research was a descriptive quantitative research. The population in this study were nurses who worked in inpatient rooms at hospitals in Indramayu Regency. Samples were taken by using accidental sampling technique. The number of samples was 223 nurses with inclusion criteria, namely nursing education at least Diploma Nursing and exclusion criteria, namely internship nurses. This research instrument used a questionnaire in the form of google form. The questionnaire consisted of 30 statements on a Likert scale. The answer choices were always, often, rarely, and never. This questionnaire had been tested for validity with the value of r Product Moment

0.361 (N = 30, Sig 5%). The patient safety statement consisted of 17 positive statements and 13 negative statements. This research had obtained ethical suitability information from the Health Research Ethics Committee STIKES BTH No. 075 / kepk-bth / VII / 2020.

Results

The results showed that the implementation of patient safety in the hospital by nurses was not optimal. This can be seen from the results of the research which states that of the 223 nurses, there are 128 nurses (57.4%) classified in the category of performing patient safety well while 95 nurses (42.6%) belong to the category of performing patient safety not well. While the standard in the implementation of patient safety is absolutely 100%. The research results are presented in table 1 below:

Table 1
Distribution of Frequency and Percentage of Patient Safety in Indramayu Regency

	Frequency	Percent
Well	128	57.4
Not Well	95	42.6
Total	223	100.0

Discussion

Patient safety culture is something that needs to be done to improve service quality and patient satisfaction. But in fact, there are still discrepancies in its implementation. This is evidenced by Setiyawati who stated that currently patient safety is still not fully transformed into a culture. There are health workers or hospital agencies who have not been able to fully implement all patient safety targets 100%⁴.

Another supportive statement is a study which shows that the compliance of officers in implementing patient safety targets is not optimal, the average score is 73.4%. The implementation of patient safety has not been fully implemented by health workers even though a complete policy and standard operating procedure is available. The person in charge of patient safety, in this case the patient safety team, has not worked optimally.⁵ The

same condition also occurs at Stella Maris Hospital where the patient safety culture is still not optimal. Astini stated that the positive response in patient safety only reached a percentage of 54.98%.⁶

In addition, the culture of patient safety at Roemani Muhamaddiyah Hospital Semarang also shows the same results where the implementation of patient safety is in the sufficient category of 71%.⁷

The implementation of patient safety that has not been optimal is possible because the hospital has not been able to embrace all the components involved. One of the important components is the patient. Patients have been considered as objects, even though they play a central role in the safety of health care in hospitals. This is proven by Sharma's research that patients are an important component for health workers and hospitals to achieve patient safety.⁸

Patient safety is one of the assessments in hospital accreditation. When a hospital is unable to implement patient safety goals, then legally the hospital does not get a license to operate. Therefore, hospitals need to implement strategies in optimizing the implementation of patient safety. Reis said that there were several efforts to promote safety culture in hospitals, including the establishment of a Patient Safety Center in the hospital to support safety measures, conducting training activities for medical personnel both through lectures and sending pamphlets to spread knowledge about patient safety.⁹

Another strategy that can be pursued to improve the implementation of patient safety is regular monitoring of patient safety culture, careful planning with support from leaders and all levels of staff, and educational programs related to patient safety. These efforts have been shown to improve the implementation of patient safety to an increase of 1.7 percentage points.¹⁰

Conclusion

The result showed that the implementation of patient safety in the good category was 57.4% (128 respondents) and the bad category was 42.6% (95 respondents). The implementation of patient safety in Indramayu Regency has not been optimal. Assistance and awards are needed to be able to improve the implementation of patient safety to increase the quality of care.

Acknowledgement

The author would like to thank the Ministry of Research and Higher Education for providing funding for this research. The author also thanks the Indra Husada Foundation and STIKes Indramayu for providing support.

References

1. WHO. 2019. Patient safety : World Patient Safety Day. <https://www.who.int/patientsafety/policies/en/> diakses 14 Agustus 2019
2. WHO. 2017. Patient Safety: Making health care safer. <https://www.who.int/patientsafety/publications/patient-safety-making-health-care-safer/en/> Diakses tanggal 14 Agustus 2019
3. Undang-Undang No. 44 Tahun 2009
4. Setiyawati W. Gambaran Keselamatan Pasien Oleh Perawat Dalam Melaksanakan Pelayanan di RS. *jurnal k3rs pertama*. 2019 October. <https://doi.org/10.31219/osf.io/2c73h>
5. Neri R.A., Lestari Y., dan Yetti H. Analisis Pelaksanaan Sasaran Keselamatan Pasien Di Rawat Inap Rumah Sakit Umum Daerah Padang Pariaman. *Jurnal Kesehatan Andalas*. 2018;7(Supplement 4) Hal 48-55. <http://jurnal.fk.unand.ac.id>
6. Astini A F. Gambaran Budaya Keselamatan Pasien di Rsstella Mari Makassar. *Prosiding Seminar Nasional Penelitian dan PKM Kesehatan* . 2016. Vol 6 No 1. Hal 152 – 163. <http://proceeding.unisba.ac.id/index.php/kesehatan/article/view/1401>
7. Ultaria S. T, Arso S, Sriatmi A. Gambaran Budaya Keselamatan Pasien Di Rs Roemani Muhamaddiyah Semarang. *Jurnal Kesehatan Masyarakat (Undip) [Online]*. 2017 Jan;5(1):118-125. : <https://ejournal3.undip.ac.id/index.php/jkm/article/view/14995>.
8. Sharma A.F., Rivadeneira N.A., Walker J.B., Stern, R.J., Johnson A.K., and Sarkar U. Patient Engagement In Health Care Safety: An Overview Of Mixed-Quality Evidence. 2018 November. *Health Affairs*. Vol. 37, No. 11: <https://doi.org/10.1377/hlthaff.2018.0716>
9. Reis Gislene Aparecida Xavier dos, Hayakawa Liliana Yukie, Murassaki Ana Claudia Yassuko, Matsuda Laura Misue, Gabriel Carmen Silvia, Oliveira Magda Lucia Felix de. Nurse Manager Perceptions Of Patient Safety Strategy Implementation. *Texto contexto - enferm*. [Internet]. 2017 [cited 2020 Oct 15] ; 26(2): e00340016. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-07072017000200321&lng=en. Epub July 03, 2017. <https://doi.org/10.1590/0104-07072017000340016>.
10. Campione J. and Famolaro T. Promising Practices for Improving Hospital Patient Safety Culture. *The Joint Commission Journal on Quality and Patient Safety*. Volume 44, Issue 1, January 2018, Pages 23-32 <https://doi.org/10.1016/j.jcjq.2017.09.001>

THE EFFECTIVENESS OF THE ASSISTANCE PROGRAM FOR BREASTFEEDING MOTHERS BY *POSYANDU* CADRES ON THE DURATION OF EXCLUSIVE BREASTFEEDING IN THE SUBURBAN AREA OF PEKANBARU CITY

¹Widia Lestari, ²Widyawati

¹School of Nursing, Riau University

²School of medicine, public health and nursing, University of Gadjah Mada

widia.lestari@lecturer.unri.ac.id

Abstract

Objective: Knowing the effectiveness of the breastfeeding assistance program by *Posyandu* cadres for the duration of exclusive breastfeeding. Method: This study used a quasi-experimental non-equivalent with control group design. The research subjects were postpartum mothers who were breastfeeding. The sampling technique is purposive sampling with inclusion criteria. The sample in the experimental group, consisted of 32 respondents, while the control group, consisted of 30 respondents. Assistance was carried throughout home visits for two months and continued with monthly visit to *Posyandu* until the baby turned 6 months old. The experimental group was given breastfeeding assistance by *Posyandu* cadres. The study was passed an ethical committee (Ref: KE/FK/1272/EC/2017). Result: The highest duration of exclusive breastfeeding in the experimental group at 24 weeks by 71.88%, while in the control group the duration of 24 weeks of breastfeeding was 6.67%. The Independent t-test results showed that there was a significant difference between the duration of breastfeeding in the experimental group and the control group with p-value < 0.05. Conclusion: The breastfeeding assistance program by *Posyandu* cadres is effective in increasing the duration of exclusive breastfeeding.

Keywords: Breastfeeding, assistance program, *Posyandu* cadres

Introduction

WHO in 2001 has recommended exclusive breastfeeding until the baby is 6 months old. However, the coverage of exclusive breastfeeding is still low ¹.

Despite the benefits of exclusive breastfeeding, it is not optimal. In Indonesia, exclusive breastfeeding has reached 54.3%². This is not in accordance with the government's target which is 80%.

Several attempts have been made by the Indonesian government to increase the achievement of exclusive breastfeeding. Among them are: the existence of the Baby Friendly Hospital program, implementing exclusive breastfeeding counseling for pregnant and postpartum mothers, and providing lactation counselors in hospitals. Exclusive breastfeeding education activities at

postnatal time that have been carried out by several hospitals that care for babies, are not followed up and evaluated by health workers when the mother is in the community (at home). Home visits that should be carried out by public health center officers are also very difficult to do. Lack of human resources and time means that home visit activities cannot be carried out. The absence of efficient referral and support of skilled personnel for breastfeeding mothers when at home, causes mothers who experience breastfeeding problems to stop breastfeeding^{3,4}.

To overcome the problem of home visits, the solution that can be done is to empower the local community. Therefore, *Posyandu* cadres as community members selected from and by the community willing and able to cooperate in various community activities voluntarily; can be empowered to assist breastfeeding mothers⁵. Research conducted to know that the

assistance provided by *Posyandu* cadres to breastfeeding mothers affects the duration of exclusive breastfeeding.

Method

This study used a quasi experiment design with a non-equivalent control group approach. This design uses two groups, namely the treatment group and the a control group. Both groups were selected without a random assignment procedure.

This research was conducted on communities in the suburban of Pekanbaru city, which borders Siak Regency, which is in the coastal area of Siak River, namely the Rumbai Pesisir District area.

The research subjects were postpartum mothers in the work area of Rumbai Public health center (intervention group) and postpartum mothers in the work area of Karya Wanita Public health center (control group). Samples were taken by purposive sampling with inclusion criteria: postpartum mothers < 1 week, gave birth normally, babies were in good health. The sample consisted of 62 postpartum mothers (32 intervention groups and 30 control groups).

The intervention group was provided with breastfeeding assistance by *posyandu* cadres, while the control group was not provided with assistance.

The intervention group was provided with assistance through home visits for 8 weeks by *Posyandu* cadres. Home visits was conducted twice a week. Then, assistance was continued montly by visiting *Posyandu* by mothers until the baby turned 6 months old.

The data analysis implemented to assess the effectiveness of breastfeeding assistance by *Posyandu* cadres in postpartum mothers on the duration of exclusive breastfeeding was The Independent t-test.

Results

1. Respondent characteristics

The characteristics of breastfeeding mothers who received breastfeeding assistance from *Posyandu* cadres can be seen in the table below.

Table 1.
Characteristics of breastfeeding mothers in the intervention and control groups.

Variable	Intervention		control	
	n	%	n	%
Age (years)				
17-25	24	75	20	66.67
26-35	8	25	10	33.33
Total	32	100	30	100
Chaildbirth history				
<i>Primipara</i>	16	50	14	46.7
<i>Multipara</i>	16	50	16	53.3
Total	32	100	30	100
Education				
Senior High School	28	87.5	27	90
College	4	12.5	3	10
Total	32	100	30	100
Employment status				
Housewife	25	78.1	24	80
Worker	7	21.9	6	20
Total	32	100	30	100
Exclusive breastfeeding experience				
Exclusive	0	0	1	3.3
Not exclusive	16	50	15	50
Have no experience	16	50	14	46.7
Total	32	100	30	100

Based on Table 1, it can be explained that most of the respondents of breastfeeding mothers (treatment and control groups) were in the age group of 17-25 years. The obstetric status of the respondents was almost equal between primiparous and multiparous. Education for breastfeeding mothers was mostly secondary education. The majority of respondents' occopation status was not working (housewife). While the history of exclusive

breastfeeding of the respondents is was that 50% of them are were not exclusively breastfed, almost half of them had no experience of breastfeeding and only one respondent had ever given exclusive breastfeeding, namely the control group.

2. Differences in duration of exclusive breastfeeding in mothers in the intervention group with mothers in the control group.

Table 2.
Differences in duration of exclusive breastfeeding in the two groups:

Variable	Intervention		Control	
	f	%	f	%
Duration of eksklusive breastfeeding:				
≤ 1 week	0	0	1	3.33
2 – 4 weeks	0	0	7	23.33
8 – 12 weeks	2	6.25	18	33.33
16 – 20 weeks	7	21.88	9	30
24 weeks	23	71.88	2	6.67
Total	32	100	30	100

Based on Table 2, it can be seen that the differences duration of exclusive breastfeeding in the posyandu cadres in the intervention group was mostly 24 weeks (71.88%), while for the control group the most duration of exclusive breastfeeding was at 8 to 12 weeks (33.33%).

3. Comparison of duration of exclusive breastfeeding in intervention group dan control group.

The results of statistical tests in both groups using the Independent t-test can be seen in the following table:

Table 3.
Comparison of duration of exclusive breastfeeding in the two groups

Variable	Mean	P Value	Mean difference (IK 95%)
Duration of exclusive breastfeeding			
Intervention group	21.88	0.001	10.28
Control group	11.6		

Based on Table 3, it can be seen that a significant comparison between the duration of exclusive breastfeeding in the intervention group and the control group, where the p value is 0.001 (p value < α).

Discussion

Assistance given to breastfeeding mothers caused most mothers to successfully breastfeed exclusively for up to 6 months. Meanwhile, mothers who did not receive assistance, most of them fail to maintain exclusive breastfeeding for up to 6 months.

Several studies have concluded that several factors can influence exclusive breastfeeding. One of the factors that can affect the duration of breastfeeding is the mother's breastfeeding experience. A research explained that a longer breastfeeding experience has a further positive effect duration of breastfeeding⁶.

Other studies mention that young age; Lack of breast milk; not knowing breastfeeding technique causes the mother to stop breastfeeding early in postpartum; Parity also affects exclusively breastfeeding mothers, i.e. multiparous are more likely to breastfeed exclusively⁷.

In Indonesia, culture has an effect on exclusive breastfeeding. Breastfeeding decisions are heavily influenced by older family members, especially grandmothers⁸.

Assistance by posyandu cadres through home visits can increase the duration of exclusive breastfeeding. Research proved that the

duration of exclusive breastfeeding for mothers who had home visits was higher than for mothers who had no home visits⁹. A research explained that breastfeeding education offered at home on day 3 postpartum was effective in increasing the breastfeeding duration and breastfeeding knowledge¹⁰. Postnatal support can also effectively increase the rates of exclusive breastfeeding from delivery to postpartum 4 months and change the breastfeeding behavior¹¹.

Conclusion

Assistance provided by *Posyandu* cadres through home visits for 8 weeks and continued when the mother brings the baby to visit the *posyandu* every month, effectively increases the duration of exclusive breastfeeding.

Posyandu cadres can be used as an exclusive breastfeeding support system in the community, as a solution to the problem of shortages of human resources and time at community health centers to make home visits.

Acknowledgement

We express our deepest gratitude towards the head of the Rumbai community health center, who has assisted in coordinating *Posyandu* cadres in the working area to be involved in this research. We also thank the *Posyandu* cadres who enthusiastically helped and contributed to this research. We also thank all respondents (breastfeeding mothers) who were willing to be involved in this research.

References

1. World Health Organization. *The optimal duration of exclusive breastfeeding*. (2002). Geneva. Download from <http://www.who.int/nut/inf.htm>. Accessed on 12 Februari 2017.
2. Pusdatin Kemenkes RI. (2017). *Situasi dan Analisis ASI eksklusif*. Jakarta: Kementrian Kesehatan RI. Download from <http://www.depkes.go.id/resources/download/pusdatin/infodatin/infodatin-asi.pdf>. Accessed on 15 November 2018
3. Fieldmen-Winter, L. (2013). Evidence-based intervention to support breastfeeding. *Pediatric Clinic of North America*, 60(1), 169-187. <http://doi.org/10.1016/j.pcl.2012.09.007>
4. Gross, S. M., Resnik, A. K., Nanda, J. P., Cross-Barnet, C., Augustyn, M., Kelly, L., & Paige, D. M. (2011). Early postpartum: A critical period in setting the path for breastfeeding success. *Breastfeeding Medicine*, 6(6), 407-412. <http://doi.org/10.1089/bfm.2010.0089>
5. Departemen Kesehatan RI. (1998). *Posyandu Penyuluhan Kesehatan Masyarakat*. Jakarta: Depkes RI
6. Bai, D. L., Fong, D. Y. T., & Tarrant, M. (2015). Previous Breastfeeding Experience and Duration of Any and Exclusive Breastfeeding among Multiparous Mothers. *Birth*, 42(1), 70-77. DOI: 10.1111/birt.12152
7. Brown, C.R. L., Dodds, L., Legge, A., Bryanton, J., & Semenic, S. (2014) Factors influencing the reasons why mothers stop breastfeeding. *Can J Pub Health*, 179-185
8. World Health organization. (2014). Bulletin of the World Health Organization. Download from <http://www.who.int/bulletin/volumes/en/>. Accessed on 18 April 2017.
9. Edraki, M., Moravej, H., & Rambod, M. (2014). The effect of home visitation educational program on the nutrition pattern and duration of exclusive breastfeeding in preterm newborns. *Pediatric Critical Care Medicine*, 15, 38-39. Doi: 10.1097/01.pcc.0000448876.26137.5f
10. Aksu H., Küçük M., & Düzgün G. (2011). The effect of postnatal breastfeeding education/support offered at home 3 days after delivery on breastfeeding duration and knowledge: a randomized trial. *The Journal of Maternal-Fetal & Neonatal Medicine*, 24 (2). <https://doi.org/10.3109/14767058.2010.497569>
11. Huang, P., Yao, J., Liu, X., & Luo, B. (2019). Individualized intervention to improve rates of exclusive breastfeeding. *Medicine*, 98(47), e17822. Doi:10.1097/md.00000000000017822