

ISSN-0973-9122 (Print) • ISSN-0973-9130 (Electronic)

Volume 15 / Number 2 / April-June 2021



Indian Journal of Forensic Medicine & Toxicology

Website: www.ijfmt.com

Official Organ of Indian Association of Medico-Legal Experts (Regd.)

XXVIII

366. Formulation and In Vitro Evaluation of Nimodipine as an Orodispersible Film2406
Ghadah Hamid Naji , Khansaa Hattam Abdul-Jabar
367. Association of Genetic Polymorphisms with Risperidone Treatment Response in Schizophrenia:
A Review2413
Gina Sabila, Rano K. Sinuraya
368. Evaluation of the Relationship between Ossification of Sternal Joints and Age with Multi-Slice
CT Scan.....2422
Gokhan Gokalp, Selman Candan
369. Assessment of Nurses' Knowledge toward Sleeve Gastrectomy in Surgical Unit at Al-Najaf Al-
Ashraf Governorate2430
Hadeel Abbass Wadi Al-Azawi, Dergham Majjed Hameed
370. An Physiological Enzymatic Study for Atherosclerosis Patients in the City of Fallujah2437
Hadeel Abdelelah Abdel Razaaq
371. A Mini Review on Covid-19 Infection and Severe Outcome on Cancer Patient.....2447
*Sameer Badri Al-Mhanna, Zaidi Zakara, Hafeez Abiola Afolabi, Afolabi-Owolabi Oluwafunke Toyin,
Rashidat Folashade Elesho,*
372. Assessment of Cervical Spine Mobility in a Subjects with Rheumatoid Arthritis Associated with Neck
Pain.....2453
Raj Mhatre, Poonam Patil
373. Maternal Risk Factors in Women With Breast Cancer in Al-Najaf Province2458
Hanan Noor Mohammad, Ali A. Al-Fahham
374. Risk factors for prostate cancer in Kohgiluyeh and Boyer-Ahmad provinces, Iran2464
Hassan Askarpour, Mohammad Hassan Lotfi, Hossein Fallahzadeh, Masoud Amiri, Dariush Bastam
375. Genetic Profiling of CYP19 Gene Haplotype in Holstein Bulls2473
Hassan Nima Habib, Khalaf A.H.Al-Rishdy, Murthda F.AL-Hellou
376. Determinant of Intention E-cigarettes Use Among a Sample of Senior High School Students in
Surabaya.....2480
Hendra Eka Alifyanto, Sri Widati, Rachmat Hargono
377. Green Tea Suppresses Serum TNF- α and TGF- β 1 Levels In Mice Model of Systemic Lupus
Erythematosus.....2488
Herin Mawarti, Jusak Nugraha, Djoko Agus Purwanto, Joewono Soeroso
378. Knowledge and Attitude Towards HIV Patients among Dental Students.....2495
Gayathri. P. S, Krithika.C, Rajkumar P, Rehana Bee, Preetha D, Vinod Kumar A.C
379. Awareness about Management of Pain and Anxiety during Dental Treatments among Dental
Students.....2502
Gayathri. P. S, Krithika.C, Arun Kumar T.M, Selvarathi K, Christy Jospeh Samuel. K, Manju.J

380. Environmental Factors and Protective Effects of Epigallocatechin-3-Gallate to Systemic Lupus Erythematosus: A Review Study2509
Herin Mawarti , Jusak Nugraha, Djoko Agus Purwanto, and Joewono Soeroso
381. A Prediction Model of Mortality in Patients Hospitalized with Diabetic Ketoacidosis in a Tertiary Referral Hospital in Surabaya, Indonesia.....2519
Hermina Novida, Fajar Setiyawan, Soebagijo Adi Soelistijo
382. In-Vitro Differentiation Adipose-Derived Mesenchymal Stem Cells into Pancreatic Progenitor Cells2527
Hermina Novida, Agung Pranoto, Askandar Tjokroprawiro, Sony Wibisono, Purwati
383. Estimation of Lepitin, Melatonin , and Adropin Hormones in Gestational Diabetes Mellitus (GDM) in Tikrit City.....2533
Hiba Hazim Salih, Rasha Shamil hussin, Wasan Sarhan Oubeid
384. Study of Laparoscopic Cholecystectomy in case of Complicated Cholecystitis2539
Honeypalsinh Maharaul, Param shah, Ohang Chaudhary
385. Immunohistochemical Expression of Myeloid Differentiation Adaptor Protein-88(MYD-88)and Toll like Receptor (TLR-4) in Human Leiomyomas2542
Huda Saddon Jassim, Ali Yhea Salman, Sajid saad mohanned
386. Autopsy Death Profile Due to Railway Injury in Mangalore, A Coastal City of South Karnataka- A Retrospective Analysis.....2551
Ibrahim Jibril, B Suresh Kumar Shetty, Pavanchand Shetty 3, Jagadish Rao Padubidri, Haneil Larson D'souza, Eshetu Sileshi, Miressa Belay
387. Access Rights to Health Services for Tolotang Believers as Minority Group, Sidrap District, Indonesia2558
Iin Karita Sakharina, Aidir Amin Daud, Hamzah Halim, Muh. Hasrul, Wahyudi Pratama Sukri Palutturi4, Anif Laila Sahir
388. Cardiac Fibrosis Attenuation by Chlorogenic Acid and Epigallocatechin-Gallate Mediated by Suppression of Galectin-3 Gene Expression and Collagen Deposition in Rat Metabolic Syndrome Model2567
Indah Nur Chomsy, M. Saifur Rohman, Mifetika Lukitasari, Dwi Adi Nugroho, Husnul Khotimah
389. A Comparative Study to Evaluate the Effect of Blood Flow Restriction Therapy and Retro Walking on Pain, Strength of Muscles and WOMAC Score in Patients of Osteoarthritis of Knee ..2575
Indrani Gurjalwar, Deepali Patil, Kiran Kumar, Pratik Phansopkar
390. Environmental Conditions and Sincerity affects Cortisol and B-Endorphins Plasma Levels in Young Healthy Subjects Undergoing Dawood's Fast2580
Indri Ngesti Rahayu, Bambang Purwanto, Moh. Ali Azis, M. Yogiarto, Aryati
391. Pregnancy Disorders and Access to Female Workers' Health Services in Sidoarjo Industrial Area During Covid-19 Pandemic.....2591
Indriati Paskarini, Tri Martiana, Firman Suryadi Rahman, Putri Ayuni Alayyannur, Shintia Yunita Arini

XXX

392. Dosage Effectiveness of the Combination Calcium Hydroxide-Propolis as an Inhibitor for *Aggregatibacter actinomycetemcomitans* Biofilm 2597
Ira Widjiastuti, Moch. Mudjiono, Nancy Cynthia Sudiartha, Grace Angelina Samuel, Ni Putu Sawitri Mega
393. Effect of Extract and Caffeic Acid Phenethyl Ester on Apoptosis of Odontoblast Cells 2606
Ira Widjiastuti, Agus Subiwahjudi, M. Aditya Syahputra, Grace Angelina Samuel, Ni Putu Sawitri Mega, Cinitra Anindya
394. Quality of Life of Post Stroke Patients and their Caretaker in Chennai 2614
Jayanth Jayaraman, M. Jagadeesan
395. Pain Relief and Post-Operative Outcome in Patients Receiving Tramadol via Thoracic Epidural versus Intravenous Method in Coronary Artery Bypass Graft Surgery 2620
Jigisha Mehta, Dr. Mrugank Bhavsar, Sara Mary Thomas, Pooja Shah, Dinesh Chauhan
396. Detection for *Candida* spp in Periodontitis Chronic 2629
Jinan Abd-Alhussein Mussa, Sameerah Kadhuim Hameed
397. Application of Two Sex Markers by Nested PCR for Gender Determination 2636
Jonathan Jun-Yong Lim, Mohd Fadhlil Khamis, Nur Haslindawaty Binti Abd Rashid
398. Structural Equation Modeling of Health Literacy, Self-Efficacy, Physical Activity, Dietary Pattern and Body Image in Obese Young Adults in Tomohon City 2643
Jonesius Eden Manopo, Andi Zulkify Abdullah, Citra Kesumasari, Ridwan Thaha Mochtar, Abdul Rahman Stang, Sirajuddin Saifuddin, Ridwan Amiruddin
399. Reflections on the Community Empowerment in Giving Exclusive Breastfeeding 2649
Joni Haryanto, Yayan Sakti Suryandaru, Sylvia Dwi Wahyuni
400. Dandelion Effect on Broiler Representation 2654
Galiba.M.Al-Kassie, Mamdooh A.M.Al-Nasrawi and Nihad Abdul Lateef Ali
401. Comparative Study between Two Methods of Management of Thalassemia Patients Have Complicated Spinal Cord Compression 2659
Haider Mekhlif Ali
402. Marked Dominance of methicillin Resistant *Staphylococcus aureus* among Iraqi Patients 2664
Heba K. Tawfeeq, Muthanna Hamid, Harith Jabbar Fahad Al-Mathkhury
403. Successful Conservative Management of Premature Rupture Membranes of Twin Pregnancy with one Fetus Papyraceus 2668
Ketut Edy Sudiarta
404. Comparison of Histological Changes in Mice Infected with the *Cryptosporidium Parvum* after Treatment with an Aquatic Leaf Extract of *Salvia Officinalis*, *Pimpinella Anisum* and, *Spiramycin* Drug 2673
Khadiji Khleaf Al-Dulaimi, Karama Tahreer Ahmed Al-Taee, Thaer Abdulqader Salih



EDITORIAL PANEL



Editor in Chief

Prof (Dr) S K Dhattarwal

Forensic Medicine, PGIMS, Rohtak, Haryana

E-mail: editor.ijfmt@gmail.com

EDITORIAL ADVISORY BOARD

- Prof Sudhir K Gupta, Head, FMT, AIIMS, New Delhi, India
 - Prof Mete Gulmen, Cukurova University, TURKEY
 - Prof. Leandro Duarte De Carvalho, Minas Gerais, Belo Horizonte, BRAZIL
 - Dr. Valery Gunas, National Pirogov Memorial Medical University, Vinnytsya, UKRAINE
 - Dr. Rahul Pathak, Forensic Science, Dept of Life Sciences, Anglia Ruskin University, Cambridge, UNITED KINGDOM
 - Dr Noha A. Magdy Elrafie, Forensic Toxicology, Ain Shams University, Cairo, EGYPT
 - Dr Rituja Sharma, Associate Prof, Law, Banasthali Vidyapeeth Jaipur
 - Dr Shankar Bakkanwar (Associate Professor) Forensic Medicine, Kasturba Medical College, Manipal, Karnataka
 - Dr K. Ravikumar, Raksha Shakti University, Ahmedabad, Gujrat.
 - Dr C. Behera (Addl. Prof) Dept of FMT, AIIMS, New Delhi
 - Dr. Kanak Lata Verma, Deputy Director, Toxicology, RFSL, Chanakyapuri New Delhi
 - Dr. Asha Srivastava (Senior Scientific Officer) Forensic Psychology, Central Forensic Science Laboratory, CBI, Delhi
 - Dr. Raghvendra Kumar Vidua, (Associate Prof), FMT, AIIMS Bhopal

EDITORIAL ADVISORY BOARD

- Dr. Aparna R. Asst. Prof. Forensic Serology & Biology, Jain University, Bengaluru
- Dr. Deepali Jain, Asst Prof, Forensic Science, BB Ambedkar University, Lucknow
- Prof. NK Aggrawal Forensic Medicine, UCMS, Delhi
- Prof. Manoj Kumar Mohanty, Forensic Medicine, AIIMS, Bhubneshwar, Odisha
- Prof. Amar Jyoti Patowary, Forensic Medicine, NEIGRIHMS, Shillong, Meghalaya
- Prof S. Venkata Raghava, Forensic Medicine, Banglore Medical College, Bengaluru
- Prof. Shalini Gupta Oral Pathology and Microbiology, Faculty of Dental Sciences, King George Medical University, Lucknow
- Prof. Virender Kumar Chhoker Forensic Medicine, Santosh Medical College, Ghaziabad, UP
- Prof. Dayanand G Gannur, Forensic Medicine, Shri BM Patil Medical College, Hospital & Research centre, Bijapur, Karnataka
- Prof Praveen Arora, Forensic Medicine, SAIMS, Indore, MP
- Prof Barkha Gupta, Saraswathi Institute of Medical Sciences Hapur, Uttar Pradesh India

- Dr. Vaibhav Saran (Asst.Prof.) School of Forensic Science, Sam Higginbottom Institute of Agriculture Technology & Sciences,Allahabad
- Dr Ariful Haque Orthopedic Surgeon Department of Orthopedic Surgery, Yan an Hospital Affiliated to Kunming Medical University
- Prof M Prashant Apollo Medical College Hyderabad
- Prof Emilo Nuzzalese, University of Turin , Italy
- Prof.Avinash Harishchandra Waghmode Dept of Forensic Medicine B.K.L. Walawalkar Medical College, Sawarde (Chiplun) Dist.Ratnagiri
- Dr. Anita Yadav Assistant Professor Forensic Science, SBAS Galgotias University, Greater Noida, UP
- Dr. Risha Jasmine Nathan Lecturer in Forensic Chemistry Anglia Ruskin University East Road, Cambridge, England, United Kingdom

OUR CONTACT INFO:

Editor, INDIAN JOURNAL OF FORENSIC MEDICINE & TOXICOLOGY

Institute of Medico-Legal Publications

Logix Office Tower, Unit No. 1704, Logix City Centre Mall

Sector- 32, Noida - 201 301 (Uttar Pradesh)

Email: editor,jfamt@gmail.com

Website: www.jfamt.com



Indian Journal of Forensic Medicine & Toxicology

Institute of Medico-Legal Publications

Unit No.1704, Logix Office Tower, Sector-32, Noida-201301 (Uttar Pradesh) India • Tel.: 0120-4294015
Mobile: +91-9971888542 • Email: editor.ijfnt@gmail.com • Website: www.impl.in

No5165/IJFMT/2020

22-12-2020

To,

Indriati Paskarini

Lecture at Department of Occupational health and safety, Faculty of Public Health, Universitas Airlangga

Dear author/s

I have pleasure to inform you that your following Original Article has been accepted for publication in Indian Journal of Forensic Medicine & Toxicology

PREGNANCY DISORDERS AND ACCESS TO FEMALE WORKERS' HEALTH SERVICES IN SIDOARJO INDUSTRIAL AREA DURING Covid-19 PANDEMIC.

Indriati Paskarini 1, Tri Martiana1*, Firman Suryadi Rahman 2, Putri Ayuni Alayyannur 1, Shintia Yunita Arini 1

1 Lecture at Department of Occupational health and safety, Faculty of Public Health, Universitas Airlangga

2 Student at Doctoral Program of Public Health, Faculty of Public Health, Universitas Airlangga
Correspondence : Tri Martiana, tri.martiana@fkm.unair.ac.id

It will be published in Vol no. 15 issue no. 2 April 2021. It is further mentioned for your information that our journal is a double-blind peer reviewed indexed international journal. It is covered by Index Copernicus (Poland), Indian Citation index, Google Scholar, CINAHL, EBSCOhost (USA), EMBASE (Scopus) and many other international databases.. The Journal is index with Scopus and fulfills MCI Criteria as per MCI circular dated 12/02/2020

With regards

Yours sincerely

Dr R K Sharma

Editor



**UNIVERSITAS AIRLANGGA FACULTY OF DENTAL MEDICINE
HEALTH RESEARCH ETHICAL CLEARANCE COMMISSION**

ETHICAL CLEARANCE CERTIFICATE

Number : 382/HRECC.FODM/VIII/2020

Universitas Airlangga Faculty Of Dental Medicine Health Research Ethical Clearance Commission has studied the proposed research design carefully, Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011, and therefore, shall herewith certify that the research entitled :

***"Prediction Index of Pregnancy Disorders in Female Workers
in the Surabaya and Sidoarjo Industrial Area"***


Principal Researcher : Prof.Dr. TRI MARTIANA, dr.,MS

Unit/Institution/Place of Research : - Surabaya and Sidoarjo Industrial Area

CERTIFIED TO BE ETHICALLY CLEARED



Surabaya, August 14, 2020
Chairman,


Prof. Dr. M. Rubianto, drg.,MS.,Sp.Perio(K)
Official No.195009081978021001

Pregnancy Disorders and Access to Female Workers' Health Services in Sidoarjo Industrial Area During Covid-19 Pandemic

Indriati Paskarini¹, Tri Martiana¹, Firman Suryadi Rahman², Putri Ayuni Alayyannur¹,
Shintia Yunita Arini¹

¹Lecture at Department of Occupational Health and Safety, Faculty of Public Health, Universitas Airlangga,

²Student at Doctoral Program of Public Health, Faculty of Public Health, Universitas Airlangga

Abstract

Maternal health is part of public health that will show a positive trend if there is a decrease in maternal mortality and an increase in delivery assistance provided by health workers in health service facilities. to know the relationship between pregnancy disorders and access to health services for female workers in the industrial area of Sidoarjo. this research was cross-sectional The sample of this study was 159 midwives. ANC visits of female workers are still low and have not reached 90%. Many female workers have experienced various pregnancy disorders. These pregnancy disorders include; abortion, anemia, and Hyperemesis Gravidarum The biggest obstacle to antenatal care performed by female workers is time and cost. During the Covid-19 pandemic, antenatal care services have made adaptations by implementing the COVID-19 health protocol.

Keywords: *Pregnancy Disorders, Female Workers, Health Service, Industrial Area*

Introduction

Maternal health is part of public health that will show a positive trend if there is a decrease in maternal mortality and an increase in delivery assistance provided by health workers in health service facilities ⁽¹⁾. The reason is because according to the ICD-10, the definition of maternal mortality is the death of a woman that occurs during pregnancy or within 42 days regardless of the age and location of the pregnancy, which results from any cause related to or worsened by the pregnancy or its treatment, but does not

Basically, the health of mothers, especially those who are still in pregnancy, needs special attention because they are prone to problems caused by many factors and for working mothers the risk factors for experiencing

these disorders increase due to the workload they get. Based on the research data, there were significant results between the workload of pregnant women and the incidence of maternal health problems, one of which is the incidence of preterm delivery ⁽³⁻⁴⁾.

The emergence of maternal health problems, especially for working mothers, could have been prevented if the mother receives special attention from the company owner, had good knowledge related to maintaining health during pregnancy to breastfeeding which the company owner could also facilitate, and had good access to the closest health services both with the work place and with the residence. The consequences of reproductive health for female workers are things that need to be studied and receive special attention, starting from the extent to which the legal system protects them, the work system they have to do during childbirth to breastfeeding, and their ease of access to health services, especially considering their time which is not flexible because their part of the time has to be spent at work.⁽⁵⁾

Corresponding author:

Prof. Tri Martiana

department Occupational Health and Safety, Faculty of Public Health, Universitas Airlangga

tri.martiana@fkm.unair.ac.id

Midwives are one of the health workers who can play a major role in preventing pregnancy problems experienced by pregnant female workers because midwives tend to be easier to reach both in terms of time and location, which are widely spread in several areas.

Sidoarjo is one of the districts in East Java, which has a large industrial area. Based on the data, most of the workers in industrial areas are actually female of productive age, which means that it is very possible for these workers to experience pregnancy while working. From a preliminary study that we conducted on several midwives in Sidoarjo area who often handle pregnant female workers, it was known that on the average, pregnant female workers experience various health problems including preterm, abortion, preeclampsia, anemia, and hyperemesis gravidarum. ⁽⁶⁾ It is assumed that the access of pregnant female workers to health services is one of the causes of the disorder that cannot be prevented from an early age, because pregnant female workers do not have flexible time to check their pregnancies at health care facilities.⁽⁷⁾ Therefore, in this study, researchers wanted to know the relationship between pregnancy disorders and access to health services for female workers in the industrial area of Sidoarjo.

Material and Method

The type of this research was an analytical study with an observational research design. The data were collected using cross-sectional method, which was done at one time without repetition and any intervention.

The population of this study was 159 midwives with the sampling process was performed using the total population. The variables used were health problems experienced by pregnant female workers and whether they regularly accessed health care facilities or not. The data were obtained from questionnaires distributed online via google form. The results of the data from the research were processed by describing the results of the cross distribution of the two variables.

Results

The respondents involved in this study were 159 people consisting of 16 non-midwives and 143 midwives. The midwives work in various health care centers in Sidoarjo District. All midwives involved in this study provided maternity services to formal, informal workers, government employees and others.

The majority of these midwives work for agencies, whether it is health centers, hospitals, or maternity homes. A total of 114 midwives did not open independent practices. Regarding the percentage of Antenatal Care (ANC), the number of complete visits performed by female workers vary widely at the range of 4% to 100%. The average ANC visit to female workers was 54.9%. There are many reasons why the ANC visit was incomplete, such as forgetting the control schedule and moving to the village and others, but the majority of the reasons the ANC visit was incomplete was because the female workers were busy working and only having holidays on Sundays so they did not have time to have their pregnancy checked.

Table 1. Problems of Pregnancy and Childbirth that Often Occur in Female Workers Patients According to Respondents in Sidoarjo in 2020

Problem	Total
Abortion	66
Anemia	51
Low Birth Weight (LBW)	23
Hyperemesis Gravidarum	52
Bleeding	45
Preterm Rupture Membrane	24
Preeclampsia	40
Preterm birth	27
SGA	3

There are many problems with pregnancy and childbirth that often occur in female workers patients, but the top three problems with pregnancy and childbirth that often occur in female workers are abortion, anemia, and Hyperemesis Gravidarum. In this question, respondents can provide information on more than one problem of pregnancy and childbirth so that researchers can obtain a lot of relevant data. The obstacle that may

be experienced by female workers is being able to have regular pregnancy checks according to the scheduled timing of the check-up hours. The majority of them only get a day off on Sunday so that their check-up hours for midwives or doctors are limited. Many health services also take holidays on Sundays so they experience obstacles in carrying out checks on their pregnancies.

Table 2. Respondents' Constraints in Providing Pregnancy Examination Services in Sidoarjo in 2020

Characteristics	Yes	Not	Total
Constraints in providing antenatal care services	48	95	143

In connection with the Covid-19 pandemic that has entered Indonesia and is endemic throughout the world, the majority of midwives stated that there were no obstacles in providing antenatal care for female workers during Covid-19 pandemic (according to health protocols), but they were also worried about patients who checked themselves at the health service because they could have contracted Covid-19 while queuing and traveling to or from health services. On the advice of the midwife, pregnant women who work are pregnant women, if possible, do *work from home* (WFH) when the pandemic is underway, keep doing health protocol if forced to check into the health service, and if possible pregnant women should be diligent to undertake consultations with a midwife or doctor by *WhatsApp* or short message.

Discussion

1. Antenatal Care (ANC) visit

From the results of the study, it was found that almost all midwives involved in this study provided pregnancy services for female workers. Female workers prefer practice midwives to get ANC services due to several factors, among others;

a. location and cost factors; midwifery practice is available in all regions. Midwives check fee are cheaper than obstetricians.

b. checking time factor; midwives have more flexible examination hours than obstetricians at the hospital.

c. convenience factor; the comfort factor is the most dominant factor. The influence of Indonesian culture makes female workers feel confident and comfortable when the midwife carries out examinations and provides delivery services.

Nevertheless, ANC visit of female worker remains generally low. Antenatal care visits will greatly affect the health of female workers. ANC visits of less than 80% will have the potential to cause various health problems ⁽¹⁾. If these health problems are not prevented from an early age, they can cause preterm birth and other labor problems.

Pregnancy disorders in female workers. Government Indonesia has recommended that pregnant women can do prenatal care at least 4 times during pregnancy, namely respectively 1 time in trimester I and II and twice in the third trimester ⁽⁹⁾. ANC visit is certainly very important. It is expected that ANC can be carried out completely by all pregnant women, including sensitive women with the aim of monitoring the progress of the pregnancy process to ensure the health of the mother as well as the growth and development of the fetus in it, knowing pregnancy complications that may occur early on, improving and maintaining the health of the mother

and baby, prepare for childbirth, reduce morbidity and mortality of pregnant women, prepare mothers and their families to receive child births so that they can grow and develop properly, and prepare mothers to pass through childbirth well and support exclusive breastfeeding.⁽¹⁰⁾

Disorders of Pregnancy

Pregnancy disorders in female workers can be caused by various factors, both when going to work and go home from work, or at work⁽⁸⁾. These factors can be in the form of physical, chemical, biological, ergonomic, and psychological factors⁽⁵⁾. Various factors can have an impact on various systems that exist in the body so that the female worker is ultimately can lead to various health problems such as disturbed menstruation, bleeding, miscarriage, low birth weight, and problems of pregnancy and childbirth⁽¹¹⁾.

The three major problems of pregnancy and childbirth that often occur in women who work in Sidoarjo are abortion, anemia, and Hyperemesis Gravidarum. Many female workers face many health problems during pregnancy and complications during childbirth and poor health during the postpartum period. Preeclampsia causes pregnancy disorders, among others; premature babies and low birth weight⁽¹⁰⁾. Pregnancy disorders among female workers in Sidoarjo are caused by several factors, among others; physical activity, long working hours and distance from the workplace. Working hours are also an obstacle for workers to get health services. According to Akhtar, T., distance from work and work stress during pregnancy are strongly associated with pregnancy complications.⁽¹²⁾ Female workers in Sidoarjo have a dual role, which is as mother for their children and as supporters of the household economy. This is what distinguishes women who do not work. The results of a study conducted by Khojasteh et al showed that the more female workers with potential complications, the higher the preterm labor in working mothers. Physical activity in pregnant female worker can predict a decrease in amniotic fluid and low birth weight⁽¹³⁾. Research conducted by Xu et al. also proved that there is a significant relationship between physical work and low birth weight⁽¹⁴⁾. Moderate to high physical activity at work is twice as likely to develop preeclampsia. Likewise, long working hours lead to a reduction in birth weight. Negative

attitudes regarding pregnancy at work also contribute to job dissatisfaction with an increase in preterm labor. Duties and environmental exposures in the workplace increase the potential risk of fetal morbidity⁽¹⁵⁾. Apart from exposure to the work environment, working shifts also affects pregnancy. According to the research results of Peter E Bonde et al. Working at night is associated with the risk of miscarriage. Recurrent circadian rhythm disturbances in night workers are associated with an increased risk of spontaneous abortion⁽¹⁶⁾

The increasing number of female workers indicates the need for regulations/policies that protect female workers, especially during pregnancy. In addition, women with a history of pregnancy complications should receive additional attention⁽¹⁴⁾. Female workers do not work in a workplace with a high level of exposure⁽¹⁶⁾. This factor needs to be controlled so that companies can minimize the risk of pregnancy problems for female workers⁽¹⁰⁾.

3. Service constraints

For female workers, examination time is one of the obstacles that often occurs. Research also stated that one of the problems that hinder ANC is the timing of the examination. This research also stated that in addition to time, the costs of both examination and transportation costs are the main problems in achieving ANC⁽³⁾. In addition to costs, knowledge and family income for pregnant women will also determine the ANC that will be carried out by a pregnant woman⁽⁴⁾. A pregnant woman with good knowledge and a family income above the UMR tend to be diligent in doing routine ANC.

4. Pregnancy screening services during Covid-19 pandemic

From the results of the study, it showed that 33.6% of midwives had difficulties in providing antenatal care and childbirth services to female workers during the pandemic. The transmission of Covid-19 is likely to occur if any of the female workers who come for pregnancy checks have contracted Covid-19. Protection against Covid-19 transmission must be provided to midwives and other female workers who come to have their pregnancy checked. However, services for examining pregnant women during the Covid-19 pandemic must still be carried out. In accordance with the MCH Service

Guidelines from the Ministry of Health, pregnancy examination services during a pandemic need to pay attention to strict health protocols to break the chain of transmission of Covid-19. Currently, the government has instructed pregnant women to carry out swabs at the gestational age of 35-37 months. This is done in order to provide the best referral and services for pregnant women who are at risk of contracting Covid-19. It is also certainly a good move, especially for working mothers, so that she can either know about their health status of being exposed to covid-19 or not. If they are infected, then the clinic would offer referential Hospital that has adequate facilities and PPE level⁽¹⁷⁾.

Conclusion

1. ANC visits of female workers are still low and have not reached 90%.

2. Many female workers have experienced various pregnancy disorders. These pregnancy disorders include; abortion, anemia, and Hyperemesis Gravidarum

3. The biggest obstacle to antenatal care performed by female workers is time and cost.

4. During the Covid-19 pandemic, antenatal care services have made adaptations by implementing the COVID-19 health protocol.

Conflict of Interest : Nil

Ethical Clearance : This Research has been approved by FKG Unair Ethical Committee 2020

Source of Fund : Universitas Airlangga

References

1. PUTI, S. H., et al. Faktor-Faktor Yang Berpengaruh Terhadap Risiko Kehamilan “4 Terlalu (4-T)” Pada Wanita Usia 10-59 Tahun (Analisis Riskesdas 2010). *Media Litbangkes*, 2014, 24.3: 143-152.
2. Nirmala SA, Astuti S, Kalemha P. Gambaran Sikap Ibu Hamil yang Bekerja Mengenai Pemberian Asi Eksklusif di PT Changsin Reksa Jaya Garut. *Jurnal Bidan*. 2017 Jul;3(2):67-72.
3. Rinata E, Dewi MA. Beban kerja ibu hamil dan kejadian persalinan preterm. 2018
4. Rahman FS, Martiana T. Analysis of factors related to maternal health in female workers in the industrial area of Sidoarjo, Indonesia. *Journal of Public Health in Africa*. 2019 Jan 2;10.
5. Rahman FS, Martiana T. Pregnancy disorders in female workers at the industrial area of Sidoarjo, Indonesia. *Journal of Public Health Research*. 2020 Jul 3;9(2)
6. Martiana T, Rochmah TN, Alayyannur PA, Rahman FS. Characteristics of the Maternal and Child Health Service of Female Workers with Maternal and Child Health Status in Indonesia. *Indian Journal of Public Health Research & Development*. 2019;10(5):1499-503.
7. Martiana T, Rahman FS, Mahdang P, Rahmawati T, Jalaludin J. The Influence of Work Factors on Reproductive Health of Female Workers in Sidoarjo Industrial Area, Indonesia. *Mlaysian journal of medicine and health science*.2019
8. Prasetyo A, Martiana T, Melaniani RS, Rahman FS. The Differences of Individual Characteristics and Working Environment That Influence Job Stress on Female and Male Workers at Pt. X Sidoarjo (Using Gender Prespective). *Indian Journal of Forensic Medicine & Toxicology*. 2020 Jul 30;14(3):1036-41.
9. Ministry of health. *Maternal Guidance*.2020
10. World Health Organization. Guidelines for the identification and management of substance use and substance use disorders in pregnancy.2014
11. Rahman FS, Martiana T. WORKPLACE HAZARD AND ITS EFFECT ON PREGNANCY DISORDERS IN FEMALE WORKERS AT THE INDUSTRIAL AREA OF SIDOARJO. *Journal of Health and Translational Medicine*. 2020 Aug 18;23(Supplement):19-25.
12. Akhtar T, Afzal S. WOMEN DURING PREGNANCY. *The Professional Medical Journal*. 2018 Mar 10;25(03):440-7.
13. Khojasteh F, Arbabisarjou A, Boryri T, Safarzadeh A, Pourkahkhaei M. The relationship between maternal employment status and pregnancy outcomes. *Global Journal of Health Science*. 2016 Sep;8(9):37.
14. Xu G, Wu Y, Yang L, Yuan L, Guo H, Zhang F, Guan Y, Yao W. Risk factors for early miscarriage among Chinese: a hospital-based case-control study. *Fertility and sterility*. 2014 Jun 1;101(6):1663-70.
15. Salihu HM, Myers J, August EM. Pregnancy in the workplace. *Occupational medicine*. 2012 Mar

1;62(2):88-97.

16. Bonde JP, Jørgensen KT, Bonzini M, Palmer KT. Risk of miscarriage and occupational activity: a systematic review and meta-analysis regarding shift work, working hours, lifting, standing and physical workload. *Scandinavian journal of work, environment & health*. 2013 Jul 1;39(4):325.
17. Mullins E, Evans D, Viner RM, O'Brien P, Morris E. Coronavirus in pregnancy and delivery: rapid review. *Ultrasound in Obstetrics & Gynecology*. 2020 May 1;55(5):586-92.