

**Menstrual Problems Experienced by Nurses who are Deployed on  
COVID-19 duty**

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## **Certificate**

This is to certify that **Achsa Eileen Anu** has undergone the BSW programme at Marian College Kuttikkanam (Autonomous) and has undertaken the dissertation work under the guidance of **Ms. Aneena Anna Sebastain**, Assistant Professor, School of Social Work, Marian College Kuttikkanam (Autonomous). She is permitted to submit this dissertation to Marian College Kuttikkanam (Autonomous), affiliated with Mahatma Gandhi University Kottayam

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## **Certificate**

This is to certify that the dissertation entitled “**Menstrual Problems Experienced by Nurses who are Deployed on COVID-19 duty**” is the bonafide record of the work carried out by Ms. Achsa Eileen Anu under my supervision and guidance and submitted to Marian College Kuttikkanam (Autonomous), affiliated to Mahatma Gandhi University Kottayam in partial fulfillment of the requirement of the Bachelor of Social Work.

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## **Declaration**

I, Achsa Eileen Anu, final semester BSW student at Marian College Kuttikanam (Autonomous) do hereby declare that the Dissertation entitled “**Menstrual Problems Experienced by Nurses who are Deployed on COVID-19 duty**” is the bonafide record of the original research work carried out by me under the guidance of Ms. Aneena Anna Sebastain, Assistant Professor, School of Social Work, Marian College Kuttikkanam (Autonomous) and that it has not been submitted elsewhere for the award of any degree, diploma, fellowship or other similar title or recognition of any university to the best of my knowledge and belief.

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## **Abstract**

Healthcare includes hospitals, clinical trials, outsourcing, etc. "The strong health system is the best defense against any outbreak." As of now, the whole world depends on the health care system and is struggling to live because of Covid-19. The health sector is the best defence against any outbreak, and the world of today is an example of this.

Doctors, nurses and other health workers are working on 7/24 to bring the world back to normal. They forget about their life and comfort zones while trying to save others' lives. Maybe they can't have food at the correct time, they can't adequately get sleep, the overtime work and most importantly they start off using PPE kit for their safety, this gives the way for a drastic change from their normal working days also restrict their free movement. PPE kit is compulsory for those who doing Covid-19 duty. Once they wear the PPE kit they were asked to remove it only while going home. More than safety it creates lots of other discomforts especially to lady nurses in their time of menstruation. This research paper is qualitative in approach using a case study research design. The researcher focuses on the Menstrual Problems Experienced by Nurses who are deployed on Covid-19 duty. The study participants are the female health care workers who worked during the pandemic in Kerala. The cases were selected using purposive sampling and the data collected through an in-depth interview method using interview guide as a tool. This study explored the problems faced by the nurses and the different experiences they had in their duty during the pandemic

*Key words:* menstruation, personal protective equipment, nurses, Covid-19 pandemic, case study

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## **MENSTRUAL PROBLEMS EXPERIENCED BY NURSES WHO ARE DEPLOYED ON COVID-19 DUTY**

Corona virus disease 2019 (Covid-19) is affected by the acute respiratory syndrome (sars syndrome corona virus 2 (SARSCoV2), which was discovered in Wuhan, China, in December 2019 as a result of unexplained pneumonia cases. On March 11, 2020, the World Health Organization declared Covid-19 a pandemic.(WHO, 2020)Because the causes of Covid- 19, because the disease's transmission routes and course are unknown, there has been uncertainty in all aspects of life, on top of the disease posing a significant risk to human health. Given this, health care professionals, who are a major force in combating the pandemic and work in high-risk environments, face a significant challenge. Therefore, health care workers are perhaps one of the groups most affected by the pandemic. (Yang & Jung, 2020)Nurses, who make up the majority of the health-care workforce, play an important role in ensuring global stability of health care systems and improving health-care practices.(Schwerdtl et al., 2020)

Menstruation, also known as a period, is the normal vaginal bleeding that occurs as part of a woman's monthly cycle. Your body prepares for childbirth every month. If there is no pregnancy, the uterus, or womb, sheds its lining. Menstrual blood is made up of both blood and tissue from inside the uterus. The first period usually occurs between the ages of twelve and fifteen, at a time known as menarche. Hence this a definition for menstruation;

Healthcare has become one of the largest sectors, both in terms of wealth and employment. Healthcare includes hospitals, clinical trials, outsourcing, etc. "The high - quality health system is the best defense against any epidemic." As of now, the whole world depends on the health care

system and is struggling to live because of Covid-19. Many of the people had lost their jobs because the economic sector was in a slump. At this time, however, the health care sector is also in the first line and also has a secure job side. As I mentioned above, the health sector is the best defense against any outbreak, and the world of today is an example of this.

### **Major challenges faced by the health care workers**

The doctors, nurses, and other health workers are working 7/24 to make the world back to normal. While trying to save other's life they forget about their life and their comfort zones. They may not have food at the right time, they may not be able to sleep correctly, overtime work and, most importantly, they start using the PPE kit for their safety, which gives way to a radical change from their normal working days, which also restricts comfort and movement. It's compulsory to wear for those who doing Covid-19 duty. Once they wear the PPE kit, they're only ordered to change it while they're going home. More than safety, it creates a lot of other discomforts, especially for the lady nurses in their menstrual period.

### **Physical problems faced by Health care workers**

Personal protective equipment (PPE) used to prevent or reduce workplace hazards and risks at work. It is intended to protect against physical, biological, and environmental hazards in the work place. The use of personal protective equipment (PPE) is critical in preventing infection transmission. PPEs are items that protect the eyes, nose, ears, mouth, bare skin, and vulnerable parts of the body, such as the hands and head, from the most dangerous infectious secretions emitted by patients. Personal protective equipment (PPE) is known to wear by healthcare workers for extended periods of time while caring for Covid-19 patients to prevent the spread; however,

PPE can cause serious skin issues due to excessive drying, air resistance and pressure, and physical strain.(Dehydration, heat, and exhaustion). (Dhandapani et al., 2021)

Other than this, use of PPE for prolonged hours will be tremendous task for female health care workers during their menstrual time. They are restricted from changing the napkins after a period of time which can cause rashes or fungal infections in private part.

### **Psychological problems faced by Health Care Workers**

Major epidemic outbreaks necessitate the recruitment of more healthcare workers. The constant increase in infected cases, the increase in death rates, the lack of any specific medicine or vaccine, extensive media exposure, enormous workload, a lack of personal protective equipment, and feelings of poor personal hygiene can all contribute to the psychological load of these healthcare professionals. In these situations, health care workers are expected to work long hours while under extreme stress. They run the risk of becoming infected when they treat sick patients. On the other hand, they, like everyone else, are bombarded with fake news and updates, all of which heighten their anxiety. And also they are being away from their family which increase their anxiety to the next level in which they don't even can share their experience with them

### **Experiences of nurses they had during their menstrual time while performing Covid-19duty**

As a common man, we only knew about the work of a nurse as usual, as we usually did later, based on personal experience with nurses. However, the nurses' work in the Covid-19 crisis is a powerful and practical demonstration of the nurses' potential. There are lots of stories that happened in between which shows the unsafe situations of nurses and also the difficulties they faced during their duty especially while wearing PPE.

17<sup>th</sup> of May 2020 was an unforgettable day for KamnaKakkar(nurse) why because that was her first Covid-19 duty, started to look after the patients of the pandemic while bleeding through her Personal Protective Equipment or PPE. She states that “I bled freely that day, though not out of compulsion but my choice”. They took 45minutes to wear the PPE kit a process called ‘donning’. Before wearing the PPE kit she had completely forgotten that it was near to the end of her menstrual cycle and time for her periods. She never minds that and all she could do to be safe amid pandemics and to make others safe, she forgets that she had a women’s body inside the PPE kit. And after few hours in between her duty, she feels something warm in between her legs and she knew what it was-periods. She was unprepared. She couldn’t leave her patient for 1hour 30 minutes (because it takes 45 minutes to wear the PPE kit and another 45 minutes to remove the PPE kit) also she couldn’t ask someone to substitute for her and finally, **she decides to bleed till it doesn’t show.**

Previous research on Covid-19and other closely related pandemics has discovered that nurses who come into contact with a usually dangerous virus have increased concerns about their personal and/or family health, making them nervous about continuing to provide care while balancing their ethical obligations.(Khalid et al., 2016). It has been reported that it is critical to share in detail the experiences of nurses during the pandemic and its impact on patients and the health care system. These studies, however, are limited(Lee et al., 2020). The current study aims to uncover the physical, psychological, and professional experiences of nurses caring for Covid-19 patients. From those explanations and real-life experience I thought to have a study on this topic and feel like much relevant

### **Review of Literature**

Wearing PPE kits for longer periods of time has always been a time-consuming task for health workers, especially women during their periods. They are, however, frontline workers, such as doctors and nurses. It's been more than a year since doctors and health workers involved in the treatment of Covid-19 started wearing PPE kits, such as clothing, face shield, eye cover and shoe cover, in the midst of humid and hot weather conditions. When it comes to women, wearing PPE becomes even more difficult during menstruation. As this area serious issue that affects their health, planned to make a study on different dimensions such as physical, psychological, and most challenging situations in their duty time. The researcher reviewed different journal articles and studies to get an understanding of the problem.

### **Issues of health professionals in the context of Covid-19**

SARS-CoV-2 is a new corona virus that first appeared in late 2019 in Wuhan, China. The disease's rapid spread posed challenges to medical systems and forced healthcare workers to deal with medical and non - medical stressors such as a lack of personal protective equipment, Covid-19 mortality and morbidity, fear of infecting members of the family, and so on. Previous outbreak evidence, as well as early evidence from the Covid-19 pandemic, suggests that these events have a significant long- and short-term impact on the mental health of healthcare workers.(Hall, 2020)

### **Challenges faced by Health care workers during pandemic**

17<sup>th</sup> of May 2020 was an unforgettable day for Kamna Kakkar(nurse) why because that was her first Covid-19 duty, started to look after the patients of the pandemic while bleeding through her Personal Protective Equipment or PPE.(the print , 2020) She states that “I bled freely that day, though not out of compulsion but my choice”. They took 45minutes to wear the PPE kit a process called ‘donning’. All she could do to be safe amid pandemics and to make others safe, she forgets that she had a women’s body inside the PPE kit. And after few hours in between her duty, she feels something warm in between her legs and she knew what it was-periods. She was unprepared. She couldn’t leave her patient for 1hour 30 minutes (because it takes 45 minutes to wear the PPE kit and another 45 minutes to remove the PPE kit) also she couldn’t ask someone to substitute for her and finally, she decides to bleed till it doesn’t show.

A woman doctor at Nalanda Medical College and Hospital too said wearing PPE kits for long hours was difficult for them. “We are provided with just one PPE kit for one shift and cannot change in between. In case of periods during duty, we exchange the kits with other doctors,” the doctor said.(The Times Of India , 2020)

“Leave periods, even on normal days it is difficult to wear PPE kits for a long duration. Sweat enters inside the mouth and we can do nothing but gulp them down,” she added.

“Instead of eight hours, we put them on duty for four to six hours. After one-day duty, they get two-day off. As far as lactating mothers are concerned.

This is a situation that happened in Nalanda medical college which creates a positive situation for the health care workers.

The next same situation happened in Manipal hospital in Jaipur, where a lady doctor who engages in covid-19 duty exchange her duty with a male doctor, in which she was not able to continue her duty wearing a PPE kit as she was going through her menstrual time. And they do not even get a bathroom break and working for six hours continuously in summer makes them. Here they face dehydration, physical isolation, mental exhaustion, being in a PPE kit makes heat and genital rashes she says they are likely to get from wearing the same pad for long period.

Dr. Shraddha Maheshwari, said, "Women make up more than 70% of the healthcare workforce worldwide." During the pandemic, the majority of these people were front-line healthcare workers. She is attempting to imply that women face additional difficulties in managing their menstruation. This not only has an impact on their health, hygiene, and dignity, but it also has an impact on the Health System's overall ability to deliver. She also takes this issue socially, saying, "Every day we talk about gender equality, let's at least start by being gender-sensitive." During the pandemic, the Indian government declared sanitary napkins to be essential commodities, but menstrual health and hygiene among healthcare workers have yet to be prioritized." "Most government-run hospitals are not air-conditioned." "During menstruation, females' temperatures are generally higher than normal, and wearing a PPE kit makes them more susceptible to sweating, adding to the discomfort of periods, as we discussed later. Additionally, because most health healthcare workers are on duty for 6 to 8 hours at a time while wearing a PPE kit, they do not drink enough water and resist the urge to urinate. A menstruating woman is not allowed to change her pad as frequently as she needs to. All of this not only impairs her hygiene and health, but also causes her to lose confidence and perform poorly at work. And the solution she proposes for this problem is to give

menstruating women a break in between duties. They can also be given adequate PPE kits so that they can change them as needed.(mid-day, 2020)

The article that came in The Indian Express on 22<sup>nd</sup> September is “Have to wear sanitary pads and diaper for hours: Female doctors on challenges of wearing PPE”

“We usually wear a diaper for passing urine,” Dr.Jaslovleen Kaur, neurologist, Paras Hospital, Panchkula, told; who is regularly required to wear PPE for eight hours straight While this is a challenge for all health professionals, female professionals may have to make more accommodations due to their physiological makeup. When they menstruate, the situation becomes more difficult. “When you menstruate, you wear a sanitary pad and a diaper, and you can't even change it for eight hours. As a result, we take extra precautions. I've never used XL sanitary pads or tampons before, but I'm forced to use them now. Wearing a diaper, especially with a tampon, is a little more comfortable.”

This is the experience of a health care worker who has been in a similar situation. The PPE is extremely warm and humid on the inside. Furthermore, because you don't get to change your pad for six to eight hours, the humidity and heat can cause genital tract infection. Even though they are concerned about health issues, they do not have any other options to remove the PPE kit or change the duty time as the number of cases increased day by day.(the Indian Express , 2020)

So far, we've all heard stories about the doctors in the PPE kits being under intense pressure and working long hours. However, this first-person account of a female nurse redefines stress and the struggles that doctors face on a daily basis in the fight against the Corona virus.”Periods even occur in a pandemic," says the Reshma Shinde, a junior resident doctor in Pathology Department at KEM



Hospital. The rare combination of sweating and bleeding during the menstrual period is something that has added to the discomfort of working in uncomfortable PPE suits."It's like a true warrior who bleeds in the line of duty. These challenges are confronted on a regular basis when a woman's body is inside a frontline worker. But, still, the Women are blessed with special powers to work in spite of all these struggles. That make them strong even in difficult times (India Today , 2020)

### **Physical problems faced by health care workers**

During the covid-19 pandemic, health care workers in high-risk clinical settings who cared for patients with Corona virus disease (Covid-19) were required to wear personal protective equipment (PPE).Over use and over time inside the PPE kit made the Health care workers to face many physical problems. During the Covid-19 pandemic, health care workers must wear PPE for more than 6-8 hours per shift. Furthermore, due to global PPE supply problems, inappropriate PPE reuse (e.g., donning a used PPE item without contamination) continues to affect HCWs. Headache, dry skin, pressure injuries, itching, hyperhidrosis, and dermatitis were the most common adverse events.(*Title Page*, 2021)

### **Psychological problems faced by Health Care Workers**

Throughout the Covid-19 pandemic, nurses have continued to play an important role in the health care sector, including infection prevention and control, public health, palliative care, and critical care. They are particularly active on the front lines as caregivers during the treatment of complicated Covid-19 cases that necessitate hospitalization. During the pandemic, nurses' workload increased in both quantity and intensity. They also had to adjust to new risks, practices,

and protocols. This situation necessitates a closer examination of the physical, psychological, and social needs of nurses who work in extremely stressful environments and thus constitute a high-risk group.(Maben & Bridges, 2020)

A study conducted based on experiences and meanings hidden in the experiences of the nurses caring for the individuals diagnosed with Covid-19. The study was conducted in Turkey which includes both married and unmarried nurses. Participants' fears of working with a rare disease, poisoning, working with unfamiliar equipment, and unfamiliar duties were all discussed. Because they were first exposed to Covid-19 patients, the majority of the participants stated that they felt uncertain and were not psychologically prepared. The participants' most intense psychological experiences during their first encounter with the virus included emotional reactions such as anxiety and fear. And also study covers the area of handling new equipments. “We enter and exit patient rooms, and when we switch to another patient, all equipment is replaced from head to toe. Workload has increased, and wearing protective clothing in the summer has been physically exhausting” this an experience shared by the health care worker. (Muz& Erdoğan Yüce, 2020)

A study which covers reasons for the psychological imbalance of health care workers. Major epidemic outbreaks necessitates the recruitment of more healthcare workers. The constant increase in infected cases, the increase in death rates, the lack of any specific medicine or vaccine, extensive media coverage, enormous workload, a lack of personal protective equipment, and feelings of poor personal hygiene can all contribute to the psychological load of these health care workers. In these situations, health care workers are expected to work long hours while under extreme stress. They run the risk of becoming infected when they treat patients with Covid-19 positive. On the other

hand, like everyone else, they are bombarded with fake news updates, all of which heighten their anxiety.(Vizheh et al., 2020)

While going through these reviews of Literatures we came to an understanding that, there are literatures which covers menstrual hygiene among nurses, problems faced by nurses by wearing PPE kit etc. But only very few have come up in the context of Covid-19 pandemic. And also problems health care workers faced while wearing PPE kit during their menstrual time

### **Research Gap**

As per the topic, it mainly focuses on menstrual problems nurses face during the covid-19 duty. And also cover-ups different dimensions such as their physical and psychological issues faces during menstruation during Covid-19 duty time, also it is compulsory to wear a PPE kit. So this study also covers up the trouble of wearing a PPE kit

There are a lot of studies that came up focusing on menstrual hygiene among teachers, adolescents, or even working women. A dearth piece of literature has come up with menstrual hygiene among nurses. So it's a new context of the study.

The majority literature only mentions overworked nurses, shift work defects, and so on. However, a dearth of literature only came up in the sense of Covid-19

Most of the studies have followed a quantitative approach which limits the core information about the nurses. The study about the activity concerns and responses to Covid-19 Pandemic is a new phenomenon and not much study has conducted.

## **Problem Statement**

Corona virus disease (Covid-19) is an infectious disease caused by a recently found corona virus. The majority of people infected with the Covid-19 virus will also have mild to moderate respiratory illness and will recover without needing special treatment. People over the age of 65, as well as those suffering from underlying medical conditions such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer, are at a higher risk. **(WHO, 2020)**

Pandemic covid-19 is clearly having a major impact among nurses in their field of duty and they are confronted with various changes to their normal working time, such as overworking hours, the use of personal protective equipment, and, most importantly, the difficulties they may face during their menstrual period. Personal protective equipment (PPE) plays an important role in this problem. As of now the whole world is depending on the health care system and struggling for life due to Covid19. The doctors, nurses, and other health workers are working 7/24 to make the world back to normal. Throughout the Covid-19 pandemic, nurses have played and continues to play role in the health care sector, including infection control practices, human health, hospital care, and intensive care. They work mainly on the front lines as caregivers during the treatment of complicated Covid-19 cases that necessitate hospitalisation.

Working in a hospital for days straight, donning a PPE kit, dripping with sweat, has always been complicated for healthcare workers. But for menstruating people, the circumstance is far worse. These exhausting overtime conditions, even during periods, have had an enormous impact on the physical and psychological health of workers, leading to further problems.

Personal Protective Equipment (PPE) includes coveralls worn over a scrub suit, a head cover, a face mask, gloves, goggles, a face shield, and rubber boots. Because of the virus's proximity and

the possibility of spreading it, proper World Health Organization (WHO) guidelines must be followed when donning and doffing PPE. Once worn a healthcare worker cannot remove it in the middle of the work, restricting them to eat, drink or even visit the washroom.

So in this era, it is important to make a study based on this problem because this is the were health care workers use personal protective kit more than later because of the Covid-19 pandemic and also in my concern I think people were less aware of such issues. So as a social worker I thought to have a study on such a problem.

### **Significance of the Study**

The purpose of the study is to identify the problems experienced by female nurses who deployed on Covid-19 duty. As health care workers play a very important role during this pandemic to make this world back to normal they have face many risky situations in their duty. And the sudden change for their duty time and way of duty, use of unfamiliar equipments all made them so confused and stressed. And also they are not getting their basic rights because working with Personal protective equipment (PPE) will be a new experience for the majority, so working with unfamiliar equipments paves the way to violation of the rights. In which they not even can use washroom according to their will.

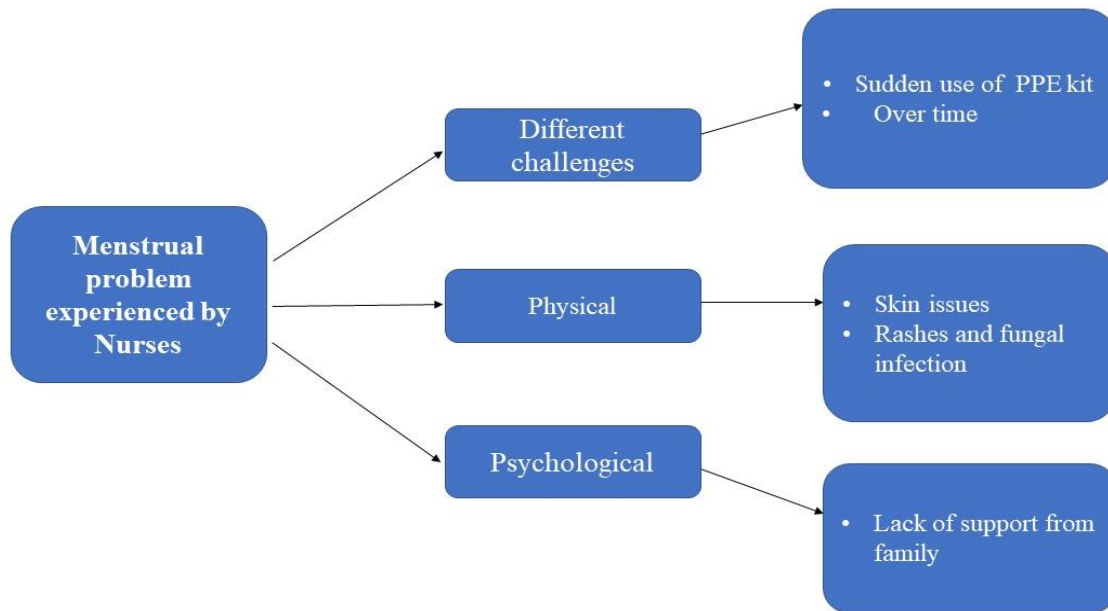
This study will be a starting point for nurses or the government because here the basic right of nurses is being violated so that this study can help to get new regulations from the government which supports female nurses. The study will also analyze solutions from a social work perspective.

### **Theoretical Framework**

Human rights in social work allow us to fully develop and use our human qualities. Period poverty is the main issue that can be considered as a human right. Menstrual hygiene is intrinsically related to human dignity – when people cannot access safe bathing facilities and safe and effective means of managing their menstrual hygiene; they are not able to manage their menstruation with dignity.

As menstrual hygiene is an important factor for women, health care workers are a group who is well aware of menstrual hygiene and their related problems if they don't have proper hygiene. Even though they are aware of such problems they are not following proper hygiene during their duty time especially while wearing a PPE kit. Because they are not supposed to change the PPE kit since they are finished with their duty time, this is an order from their management as the less availability of PPE kits. So here they are violating the rights even without knowing they are violating their rights

**Conceptual Framework**



**Figure 1:** Conceptual framework of menstrual problems experienced by female nurses in the context of Covid-19

The above figure depicts; the problems faced by the female nurses during their Covid-19 duty. As health care workers have to work double of their normal duty time during the pandemic to make this world back to normal they have to face many risky situations in their duty. And the abrupt change in their duty time and method of duty, as well as the use of new and unknown equipment, all contributed to their confusion and stress. Furthermore, they are not receiving their basic rights because working with Personal protective equipment (PPE) will be a new experience for the majority of them, and working with unfamiliar equipments opens the door to rights violations. In which they not even can use washroom according to their will. This leads to certain physical issues

### **Research Question**

1. How changes in the working environment of the female nurses During COVID-19 pandemic triggers menstrual related problems?

### **Objective**

- To explore the problems faced by female nurses who have deployed on Covid-19 duty during menstrual period

### **Method**

#### **Research Approach**

The approach used in this research paper is Qualitative Approach. Qualitative research aims to get a better understanding through the first-hand experience. As this study mainly focused on direct ideas and experiences of female nurses who are deployed on Covid-19 duty, qualitative research approach helped in getting such information. And this study is a subjective dominie

#### **Research Design**

This research paper is a qualitative in nature using a case study research design. The researcher chose a case study research design because the challenges faced by the health care workers while wearing the PPE kit during the time of menstruation, during the time of pandemic is a study which is least covered, only limited studies are found related to this problem. This design helps the researcher to gather information related to their experiences and problems they had during their duty time.



**Area of the study**

The universe of the research is Nurses who are deployed on Covid-19 duty in Kerala

**Sample Size**

I collected information from the seven respondents who are deployed on Covid-19 duty in Kerala

**Sampling**

The purpose of the research is to study the menstrual problems experienced by the nurses who are deployed on Covid-19 duty. The type of sampling used for the study is Purposive Sampling. The researcher took purposive sampling because there is a need to collect samples directly from the nurses who are deployed Covid-19 duty. Purposive sampling is a non-probability sampling technique where the researcher will select the unit of the sample based on the experiences in the field.

**Tools and Method of Data Collection**

The researcher collected the data through an in-depth interview using interview guide as a tool. The mode of conducting the interview was through phone calls and calls were recorded with the prior permission of the respondents. The theme of the interview is based on the objectives of the study. The type of interview questions is open-ended and it helps the respondents to provide their opinions.

### **Data Analysis**

The collected data is analyzed using case analysis. The data collected in the local language were translated manually to English and each case was written separately for analysis. Then the cases were analyzed themes-wise; such as psychological, physical, and major challenges they face during the covid-19 pandemic. A further analysis was done by comparing the similarities and differences of the respondent's opinion. To make the analysis more objective and authentic the verbatim quotes of the participants are used

### **Ethical Considerations**

All the participants were treated under ethical guidelines. However, there were no identifiable risks for participating in this present studied. Firstly, the data taken from other studies were cited in this researched. Secondly, data integrity and discipline were maintained throughout the researched process, and this studied has not done any manipulation during the data collection and analysis part. Minimize the risk of harm, through this research; the researcher did not harm the participants physically, psychologically, or financially.

The researcher protects all the respondents' data from the initial stage of data collection. The researcher intended to provide participants' identity in the present studied, the permission was obtained first and provide a pseudo name for the respondents not to reveal their identities. In that way, the researcher maintains the samples' privacy and anonymity to prevent them from any harm. The researcher maintains a professional relationship with the samples and did not have been excessively intrusive

## Results

### Case Study: 1

Name: Anupama (name changed)

Age: 26

District: Pathanamthitta

Anupama is just 26, the one who started her nursing carrier just before three years. She worked in a hospital that is far away from her home town. The sudden change in her daily duty due the pandemic makes her more stressed literally she has no idea on how to handle this tough situation as she doesn't have much experience. Even though she is working in an air-conditioned hospital the experience of wearing a PPE is uncomfortable. "*We will start sweating as soon as we wear the PPE kit*"; just think of wearing a plastic gloves for an hour our hands will sweat and feel very uncomfortable this is the same experience we feel each minute inside a plastic suit is intolerable. This is an example she used to explain their experience inside the PPE kit on normal days.

The experience inside the PPE kit during the menstrual days will be double as compared to normal days. She faces abdomen pain and some other health issues during menstruation, and PPE kit and those uncomfortable situations make her angrier towards the duty she has to be done. They not even can walk freely while on the PPE kit and during the menstrual time that takes to the next step of the phase. As we know during menstrual time we are asked to drink more water to hydrate our body but while wearing the PPE kit we can't even drink the needed water. Because they can't go to the washroom with the PPE kit, if they need to go they want to remove the PPE kit also a PPE

kit can use only one time after one use they have to throw that so the hospital management didn't promote them to remove the PPE kit once after their duty time.

At last, she added some difficulties faced in variations in duty time. She said later, they were getting adjusted with both the day duty and night duty once after the pandemic hits they faced changes in duty time. Wearing a PPE kit and engaging in duty is a tough way in that case doing extra duty is the toughest situation at last she also added that doesn't affect much.

These situations are being common for them by day by day. They were trying hard to get adjusted to the situation and to give their best to make the world back to normal. By hearing her voice I can understand that she had a strong hope in that and she takes all the situations as her opportunity to save the world

**Case Study: 2**

Name: Angela (name changed)

Age: 24

District: Kottayam

Wearing a PPE kit for hours together is a huge task, wearing the same during menstruation will be a tedious task. And she said *“these times will forever be in my mind because it gives an unforgettable experience both positively and negatively”* this is how she started. The main issue said by this respondent is her mood swings during menstruation and it takes to the next step while on the PPE kit. She not even can concentrate on her duty. She added *“I have missed some patients in my under during those times”* wearing the plastic already makes our body sweat when that was during menstruation it increases the risk to the next step. *“I may get angry towards my companion during duty time without any valid reasons”*. Once they get inside the PPE kit they can only remove it after the end of duty time that resists them from changing the napkin even after 6 hours, as the result she faces rashes and vaginal yeast infection. That makes me more uncomfortable during those days. Even though she was not going through a good time, it is compulsory to do the duty and wear the PPE kit.

But in a positive way she talked like; *“I too got a chance to work during this pandemic to bring back the world to normal and I am proud of my profession”*

**Case Study: 3**

Name: Aiswarya P (name changed)

Age: 26

District: Pathanamthitta

The 3<sup>rd</sup> respondent has started her conversation by saying *“the much-needed study”*. The environment inside the PPE kit is hot and humid, the main challenge she faced during the covid-19 duty was the breathing issue and she added, it increases during the time of menstruation *“I feel like I am not even getting enough air to breathe and some time feels like I am going to die”* even though she said in an easy way we can understand the depth of the challenge she faced. Also, she feels difficulty walking by wearing the PPE kit along with two pads to avoid leakage. Through the increased working shift she not even getting time to connect with her family and that makes her psychologically down, she not even can share her problems with her loved ones that take her to face anxiety and stress and at last, she added *“now I have got adjusted with the situations and trying to teach me by saying this is the new normal”*. Ensuring menstrual hygiene is as important as ensuring food, water, shelter, and treatment. After all, she is a nurse knowing all the aftereffect of using a pad for long hours she is pleased to go through such situations; using a pad for longer hours can cause; skin irritation, causes discomfort and may lead to dermatitis, a medical condition in which the skin swells, turns red, and, at times, becomes sore with blisters. She had imparted this knowledge to me. However, the use of a PPE kit prevents her from carrying out the necessary hygiene practices during her menstrual period.

**Case Study: 4**

Name: Anupriya (Name changed)

Age: 24

District: Kottayam

I called my next respondent almost at the time of 6 pm. She was so tired by that time; we could understand that from her voice. She gave her time for me in between her duty. She started her conversation by saying *“I just get fed up with this, for the outsiders; we are doing Covid-19 duty did they know how pathetic our condition inside this PPE kit is?”* when I asked her to share an experience of her during covid-19 duty, *We're on our knees here, and it's really difficult; we're all doing our best, but we don't feel. We feel like we could do more, but I know we can't. We're staying away from our families and putting ourselves in danger to save other people's loved ones; it feels like a losing battle, but it's not; we all have hope and are doing our best,* this is how she said. And the experience she had with PPE kit was double of her expectations. Within an hour her body temperature has increased, her body gets weak and she feels unconscious even though they can't take rest or have some water because the hospital management will only provide them with one PPE kit for a day and it's a long process of donning and doffing of PPE kit, so the management will not promote them to change the PPE kit in the reason of wasting time and also there is a problem of availability of PPE kit in hospitals.

Without any further question she said, the problem with the PPE kit will increase in the time of menstruation. During the menstrual time, she had to face physical problems like back pain, abdomen pain, and so on. And at this time she faced those pains inside the PPE kit. She doesn't even drink water as much as she wants and as the other respondents said she too faced a problem

in changing the sanitary napkin. For long 12 hours, she used the same pad and she bleeds inside the PPE kit.

### **Case Study: 5**

Name: Tessa (Name changed)

Age: 23

District: Ernakulam

The next respondent who shares her experience is the one who gets away from her family for the first time in her life. When I asked to share her experience of covid-19 duty she started by saying the above statement. It's her first experience in life to stay away from her family and she added that *"it was very tough for me but I adjusted because it affect my family safety"* the increased shift in working hours pushed her to stay in the hospital and availability of staff was less in her hospital so they need more number of staff in the time pandemic. This was the reason which made her to stay away from her family. And she said *"first few days I was mentally down thinking of my family and also I felt afraid, am not getting time to share my problems with my family"* these all reason made her down and she lost her experience in working. Above all, as all other respondent stated she also go through a very tough face of wearing a PPE kit continuously for long hours. On normal days she drinks lots of water but when the case of the PPE kit came she not even can sit properly in the first days. And she said, knowingly she avoids drinking water because they are restricted from using washroom while wearing PPE kit. Even when the sweat keeps dripping down the face, they just can't even wipe.



The challenges and difficulties of donning the equipment from head to toe and staying in it for hours also involve not drinking water or going to the washroom for at least 6-8 hours. And the next main issue they face; proper communication during this phase is a difficult task as others cannot see the facial expressions or lip movements. Also, the vision through the goggles gets blurred when the sweat covers their face, and seeing people and objects in the vicinity is indeed a tough task.

Even though it's a very tough task this is the only way to prevent the healthcare workers from the virus.

**Case Study: 6**

Name: Riya (Name changed)

Age: 26

District: Pathanamthitta

The challenges and difficulties of donning the equipment from head to toe and staying in it for hours also involve not drinking water or going to the washroom for at least 6-8 hours and at the time of menstruation, this situation makes them more pathetic. As other respondent states, she also faces the problem of changing the pad after awhile. Body temperature is elevated during menstruation, which makes the sweating inside PPE worse and exacerbates issues like dehydration. Putting on and removing PPE prevents quick changing of menstrual hygiene materials, leads to bleed into protective suits, suppresses menstruation through the use of oral contraceptive pills. Even though she is well known about the side effect of taking pills to suppress menstruation they are forced to do such activities to keep themselves away from the situation of bleeding in a PPE kit. By using such pills she faced menstrual disorders. While healthcare workers continue to put in their best efforts, working extra hours to save lives from the pandemic, many are simultaneously facing health hazards themselves. Owing to tremendous work pressure, exhausting working hours, and spending long hours in PPE Kits no matter if they are going through their menstrual time or not.

**Case Study: 7**

Name: Jasmin (name changed)

Age: 26

District: Kottayam

Health care workers on the front lines of the pandemic are reporting that they lack the resources to manage their periods. Between treating an overwhelming number of patients, not having menstrual products easily available, and following certain protocols for removing protective suits, changing menstrual materials. This has been a common issue for all health care workers and that is visible from the above responses.

Throughout the pandemic the support and help they wanted from the management side were the availability of another PPE kit during the time of menstruation period as the PPE kit can only be used once and during the menstruation period they need to change the pad several times and it becomes a matter of health and hygiene and the risk factor also get higher.

Another want was regular break or gap during their menstrual cycle as it becomes very hard for them to carry all the tension and stress during their work hours. A break would also give them a chance to relax and fresh up their mind. Though there was all case of emergencies, still they wished to reduce their time of work during the menstrual period. The workload was very higher during that time and they didn't have time to relax and express their feelings and emotions

**Case Analysis**

### **Age of the participants**

As the study is based on menstrual problems, obviously all participants are females. As I collected seven data based on the problem, among that five participants comes under the age group of 20-25 and one participant was 40+

The first objective of my study is;

### **Theme 1: Problems faced by female nurses who have deployed on Covid-19 duty during menstrual time**

The main challenge faced by all nurses who worked for Covid-19 during their menstrual period is to wear a PPE kit. While the PPE is a difficult task for all health workers, for female professionals, the situation becomes more difficult, especially when menstruating. After all, they took time to get adjusted to the quick changes that came in their duty time. At the time of menstruation that will make them more discomfort during the duty time. Once a health worker dons a PPE, they cannot remove it till the time they are working. This means they have to wear it for prolonged hours. It causes them suffocation. And since they cannot doff it, there is **no possibility of going to the toilet**, to avoid which, they cannot drink fluids or eat. Eating and drinking would anyway require one to remove their mask which is prohibited. One of the participants said that *“she cannot even concentrate in her duty during the menstrual time”*. *“Those who bleed heavily also resort to using two pads or more while they are in their PPE”* added by another respondent

### **Theme 2: The physical problems experienced by nurses during menstrual time**

Even as one takes extra precautions, wearing a sanitary pad or tampon for such a long duration increases the risk of various health complications. The environment inside the PPE is very hot and humid. And since you do not get to change your pad for six to eight hours, the humidity and heat can lead to infection two of the nurses said “they feel difficulty even while walking with PPE kit during the menstrual time”. One among the nurse said “*I only drink less water on duty days because we only can urinate once after the PPE kit is removed*” as they knew all the side effects of such issues they are pleased to go with such actions. And another main challenge faced by the nurses is, changing the napkins during Covid-19 duty. As they are directed to use only one PPE kit for one time and also it has a long process to wear and remove the PPE kit. So the management will not promote changing the PPE twice a day. As a result, they are restricted from changing the napkins after a few hours. So they are pleased to use the same napkins continuously; which causes rashes and other health issues. In some situations, they will take medicines even after they were aware of the side effects

### **Theme 3: The psychological problems**

“Psychological symptoms such as the tendency to become angry, irritable, tense, anxious and restless as well as behavioral symptoms like depression, nervousness, and crying are seen” These are some common psychological issues seen in every woman during their menstrual time.

While healthcare workers continue to put in their best efforts, working extra hours to save lives amid the pandemic, many are simultaneously facing health hazards themselves. Owing to tremendous work pressure, exhausting working hours, and spending long hours in PPE Kits, female healthcare workers have now started facing problems related to PCOS/PCOD and

menstrual problems.”Polycystic Ovarian Disease (**PCOD**), also known as Polycystic Ovary Syndrome (PCOS) is a very common condition affecting 5% to 10% of women in the age group 12–45 years. It is a problem in which a woman's hormones are out of balance. It can cause problems with menstrual periods and make it difficult for her to conceive.”

Five of the seven respondents stated that “Working conditions are unhygienic and PPE equipment doesn’t allow them to change easily so we are not able to maintain menstrual health and hygiene. It is a professional demand to be in these suits and using a washroom is also a tough way while on PPE kit, as the result, PPE kit is being uncomfortable and disturbing and can affect the professional commitment which may also result in absenteeism from the duty”

### **Discussion**

The data collected using qualitative approaches have been analyzed in the result section. The data collected will help to understand the relationship meaningfully. This section discusses the findings from the analyses of data and reaches some logical conclusions. This section also provides a summary of findings, recommendations for providing a helping hand to nurses to deploy for Covid-19 duty especially during their menstrual time. The study was conducted to understand the challenges faced by nurses during their covid-19 duty especially during their menstrual time, their psychological issues, and physical issues. The study was conducted among the nurses who deployed in Covid-19 duty in Kerala. The case study research design was adopted for the study.

### **Participants of the study**

Data were collected from seven women who deployed for covid-19 duty in Kerala. Semi-structured personal interviews were conducted to obtain the data. The age limits of the respondents were between 24- 40. Among seven respondents one of the respondents was married women and others are unmarried

### **Problems faced by the nurses during covid-19 duty time**

While going through the responses from participants about the problem they faced during the duty time, we could understand that; the main issues they face were wearing PPE kits for long hours. As this is the main issue it can create so many other variations in their duty and also some other physical issues. As we know they are wearing PPE kit for their safety it may create more difficulties than ever, we could understand that from the responses from the participants. Once a health worker dons a PPE, they cannot remove it till the time they are working. This means they have to wear it for prolonged hours. It causes them suffocation. And since they cannot doff it, there is no possibility of going to the toilet, to avoid which, they cannot drink fluids or eat. Eating and drinking would anyway require one to remove their mask which is prohibited. They were working for the world without considering their health and trying hard to make the world back to normal.

Dhandapani et al.(2021) says about the defects of the PPE kit, it mostly explains the skin allergies and increases in body temperature. Also later PPE kits were only used in operation theaters or other very rare cases. That was only for few hours which we can afford but when the pandemic hits the situation has changed and the use of PPE kit were increased double the time. That creates more issues especially during the menstrual time of female nurses. They not even can use washrooms while on the PPE kit and can't change the sanitary napkin after a while. Such issues haven't yet been discussed in previous studies. The covid-19 pandemic has affected their freedom

of duty, creates more issues than safety. The findings show that the nurses were trying hard to get adjust to the new normal of their duty

### **Physical and psychological problems faced by nurses during covid-19 duty**

The physical problem is common during the time of menstruation, during the duty days inside the PPE kit it takes into the next extent of discomfort. The environment inside the PPE is very hot and humid. And since you do not get to change your pad for six to eight hours, the humidity and heat can lead to infection two of the nurses said “they feel difficulty even while walking with PPE kit during the menstrual time”. While going through the responses from the participants we can understand that they are facing a tough situation during their menstrual time and trying hard to cop up while inside the PPE kit. Also, we came to know that they are only provided with one PPE kit while on the duty and that makes them restricted from removing the PPE kit to use the washroom or change the page after an interval. While going through some studies we could understand the disadvantages of using the same pad for long hours but no studies have come up with these reasons.

Psychological symptoms such as the tendency to become angry, irritable, tense, anxious, and restless as well as behavioral symptoms like depression, nervousness, and crying are seen. These are some common psychological issues seen in every woman during their menstrual time. While going through the responses also we could understand that they also face such psychological issues. While health care workers working hard to take back the world to normal they simultaneously face physical as well as psychological issues. Over time, workload, the new situation of duty such reasons increase their psychological problems. The findings show that they may get angry towards patients suddenly during the menstrual time.



### **Need and expectation of female nurses**

Throughout the pandemic the support and help they wanted from the management side were the availability of another PPE kit during the time of menstruation period as the PPE kit can only be used once and during the menstruation period they need to change the pad several times and it becomes a matter of health and hygiene and the risk factor also get higher.

Another want was regular break or gap during their menstrual cycle as it becomes very hard for them to carry all the tension and stress during their work hours. A break would also give them a chance to relax and fresh up their mind. Though there was all case of emergencies, still they wished to reduce their time of work during the menstrual period. The workload was very higher during that time and they didn't get time to relax and express their feelings and emotions. From the responses collected, we could get these results

### **Limitations of the study**

The Covid-19 pandemic has been an unpredictable challenge to healthcare workers and also our healthcare system. Their working time, their working methods all has got a rapid change after the pandemic. As per the study they go through many stages to get adjusted with these situations.

The main challenge or limitation of this study was the "availability of respondents". As I mentioned above pandemic was an unpredictable challenge to healthcare workers and they face variations in their duty time, they have to work overtime. So getting a respondents even through phone calls was a task, even if they pick-up the phone calls they were not in mindset to answer our question because they are tired with their duty. In some cases respondent got angry while sharing their experience. The challenges and experience vary from each individual as each one has their own experiences.

### **Suggestions**

Apart from these challenges there are other challenges they faced during their duty time. Here we only discussed about the menstrual problem they faced during the duty time but other than menstrual problem there are many other problems like low income, misbehavior from the heads, misbehavior they face from patients etc. more study is needed to cover these areas. Also through this we get to understand there is menstrual hygiene problems in medical professionals so by considering this study as a baseline, a quantitative study can be taken to analyze the menstrual hygiene among medical professionals

### **Conclusion**

The purpose of the study was to explore the menstrual related problems experienced by female nurses who are deployed on Covid-19 duty in Kerala. This study develops evidence in supporting women healthcare workers in developing or helping them with social work intervention. Also this study may help the management who help the women healthcare workers for their development and will be a reference of the problems they faced during the pandemic as they shared their unfulfilled needs during their duty time. This study create an evidence in this area

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## Appendix

### Interview Guide

**A. problems faced by female nurses who have deployed on Covid-19 duty during menstrual time**

1. Tell me about a challenging experience you faced in your previous covid duty?
2. What is your experience on wearing PPE during menstrual time?
3. How could you manage the overtime duty inside the PPE kit during the time of menstruation?
4. What are the challenges you feel from yourself to get adjusted with the changes in the duty time and with the use of PPE kit

**B. the physical problem experienced by nurses during menstrual time**

5. While knowing all the physical hazards how did you manage those menstrual days inside PPE kit
6. While the time of overtime duty inside the PPE kit during menstruation did you feel any physical problems and how could you manage it?
7. What measure do you took to be hygiene while managing both menstruation and duty together

**C. The psychological problems**

8. Nursing work often involves a number of daily frustrations. Tell me about some of the frustrations you have dealt with recently during Covid-19 duty at the time of your menstruation
9. Have you ever get angry towards Covid-19 patients at the time of menstruation due to the change in psychological factors during menstrual time. If yes, what is the situation? If the answer is no, how you controlled yourself, what are the strategies you took?
10. Are you getting enough time to be relaxed in between the Covid-19 duty even at the time of menstruation? If yes how? If No, whatdid you feel?
11. Have you ever felt any support from the management to deal with both menstruation and Covid-19 duty together? If yes, what are they? If no what is your opinion about the management or did you have any suggestions?
12. Did you face any issues in your family matters? Have you got enough time to spent with your family

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