

# **ANALYSIS OF FACTORS AFFECTING ANXIETY ON MIDWIFE OFFICERS AT BUNGAH COMMUNITY HEALTH CENTER DURING COVID-19 PANDEMIC**

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*Submitted: 03<sup>th</sup> November 2022 Revised: 19<sup>th</sup> December 2022 Accepted: 27<sup>th</sup> December 2022*

**Abstract:** Introduction. Midwives must continue to carry out their duties in checking health of mothers and children and childbirth during COVID-19 pandemic, This condition makes them feel anxious. prevalence of anxiety for health workers during a pandemic is 44.7%. This study aims to analyze influence of factors that influence anxiety in midwives at Bungah Health Center during a covid-19 pandemic. Method. type of research is an analytic study with a cross-sectional approach. sample in this study were all midwives at Bungah Health Center as much as 32 respondents. variables in this study were age, education, knowledge, availability of PPE, and anxiety which were measured using Hamilton Anxiety Range Scale (HARS) questionnaire, and data were analyzed using binary logistic regression statistical tests. Result. results showed that 50% of midwives experienced anxiety. 68.75% of midwives are >35 years old. 84.37% of midwives have 3-years diploma, 59.37% of midwives have good knowledge, and 68.75% of midwives stated that PPE is complete. results of statistical tests showed that there was an influence between age and knowledge on anxiety of midwives with OR values 1.877 and 0.306, while education and availability of PPE did not have a significant effect on midwives' anxiety. Conclusion. Age and knowledge have an effect on anxiety in midwives at Bungah Health Center, midwives with age > 35 years are at risk of experiencing anxiety by 1.87 times greater than with age <35 years, and midwives with good knowledge are at risk of experiencing anxiety by 0.3 times greater than with poor knowledge.

**Keywords:** Anxiety, Midwife, Covid 19 Pandemic.

## INTRODUCTION

Corona Virus Disease 19 (COVID-19) is a new type of infectious disease that has recently become a worldwide pandemic. Covid-19 was first reported at the end of December 2019 in China, precisely in the Wuhan area (Phelan, 2020). The World Health Organization (WHO) estimates that global deaths from Covid-19 are around 3.4% (Jemes, 2020). Despite the higher mortality rate among the elderly and having other illnesses, a cohort study revealed that 36 COVID-19 survivors in China identified the most common symptom as fever (94%), shortness of breath (58%), fatigue (47%), and cough (39%) (Haung, 2020).

The number of positive cases due to the Covid-19 virus is increasing day by day. Diseases caused by Covid-19, like other pandemics, are predicted to cause serious mental health problems among the public and health workers, causing huge economic losses worldwide (Sögüt, 2020). Various psychological disorders have been reported and publicized during the Covid-19 outbreak in China, at individual, community, national and international levels. At the individual level, people are more likely to experience fear of contracting and experiencing severe or dying symptoms, feel helpless, and stereotype others. The pandemic even causes a psychological crisis (Xiang, 2020).

Based on data from the Ministry of Health of the Republic of Indonesia as of April 1, 2021, globally there were 127,887,462 confirmed positive cases, 2,796,561 cases of death with a CFR of 2.2%,

there were 222 countries infected with Covid-19 and 190 countries with the transmission. local. In Indonesia, out of 8,545,630 people examined, 1,517,854 were confirmed positive for Covid-19, 41,054 cases of death with a CFR of 2.7%, while cases recovered from Covid-19 were 1,355,578. The death rate due to Covid-19 in medical personnel was 647 medical personnel consisting of 289 doctors, 27 dentists, 211 nurses, 84 midwives, 11 pharmacists, and 15 medical laboratory personnel. (IDI, 2021). Meanwhile, data obtained from the Central Board of the Indonesian Midwifery Association, there were around 2,291 midwives who were confirmed positive for Covid-19 and 22 people died (Supriyatin, 2020)

Health workers, such as nurses and midwives, work on the front lines to treat patients which allows them to have close contact with patients so that health workers can be exposed to the Covid-19 virus (WHO, 2020). Even though you have used personal protective equipment and precautions, you can still be at risk of being exposed to COVID-19 (Aksoy, 2020). Facing this critical situation, health workers who are directly involved in the diagnosis, treatment, and care of patients with COVID-19 are also at risk of experiencing psychological distress and other mental health symptoms. The number of confirmed and suspected cases is increasing day by day, increasing workloads, depletion of personal protective equipment, widespread media coverage, lack of certain drugs, and feelings of not being adequately supported can all contribute to the mental burden of these

health care workers. (Lai. 2020).

The important role of health workers during a pandemic makes them more vulnerable to anxiety and stress (Temsah. 2020). Uncertainty about when the outbreak will end creates negative emotions. Increased levels of anxiety and intolerance of uncertainty during the pandemic are expected to cause many psychological problems in midwives (Aksoy. 2020).

Anxiety disorders (anxiety) are health problems in general and mental health problems in particular. Anxiety can be a motivating force for the growth and development of the individual concerned. Anxiety is related to stress. Therefore, anxiety arises as a response to stressors, both physiological and psychological stress. This means that anxiety occurs when a person feels threatened both physically and psychologically (Asmadi. 2008). Research conducted by Leodoro in the Philippines stated that out of 325 health workers, 123 (37.8%) respondents had a high level of anxiety (Leodoro, 2020). Then research conducted by Lei in China stated that the level of anxiety is high in health workers who have a high risk of exposure in the radiology department, but most of the workers have anxiety that is still within normal limits (Lei. 2020).

Another study found that during the COVID-19 pandemic the prevalence of depression, anxiety, and stress-related symptoms among health workers in China was found to be 50.7%, 44.7%, and 73.4%, respectively (Elbay. 2020). But in a study conducted by Fitria showed that more than half of respondents (55.2%) did not experience anxiety, less than half (36.2%) of

respondents experienced mild anxiety and a small portion (8.6%) of respondents experienced moderate anxiety. (Fitria. 2020).

Based on the background described above, the researchers are interested in examining the analysis of factors that influence anxiety in midwives at Bungah Gresik Health Center.

## MATERIALS AND METHODS

This study used an analytical survey research design with a cross-sectional approach. The sampling method uses total sampling. This research was conducted at the Bungah Health Center, Gresik Regency which was carried out during September-November 2021, the population in this study were all midwives who served at the Bungah Gresik Health Center as many as 32 respondents, all of which were taken as samples. The variables in this study were age, level of education, level of knowledge, availability of PPE, and anxiety.

Data collection using questionnaires and interviews with midwives, measuring anxiety levels using the humiliation anxiety range scale (HARS) method, this method consists of 14 question items to measure signs of anxiety, including feelings of anxiety, tension, fear, sleep disorders, intelligence disorders, depressive feelings, somatic symptoms, sensory symptoms, cardiovascular symptoms, respiratory symptoms, gastrointestinal symptoms, urogenital symptoms, autonomic symptoms and behavior of respondents during the interview. After the data is collected, it will be analyzed using binary logistic regression statistical tests.

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## RESULTS AND DISCUSSION

### 1. General Description of Respondents

Midwives are one of the elements of primary care, which provides health services, MCH, family planning, and reproductive health. In this study, there were 32 midwives who were respondents at the Bungah Gresik Public Health Center, including

midwives who served in sub-health centers in each village and midwives who served in basic emergency obstetric and neonatal services. The following is an overview of the midwife respondents at the Bungah Gresik health center during the covid-19 pandemic.

#### Age

The following table shows the age

frequency distribution of respondents at the Bungah Gresik Health Center

**Table 1. Distribution of Respondents based on the age of the midwife at the Bungah Gresik Public Health Center**

No	Age	Frequency	Percentage
1	>35 years old	22	68,75
2	<35 years old	10	31,25
Total		32	100,00

Based on Table 1. it is informed that most of the respondents (68.75%) are >35 years old.

#### Education

The following table shows the distribution of respondents' education

frequency at the Bungah Gresik health center

**Table 2. Distribution of Respondents by Midwife Education at the Bungah Gresik Health Center**

No	Education	Frequency	Percentage
1	3-year diploma	27	84,37
2	4-year diploma/Bachelor	5	15,62
Total		32	100,00

Based on Table 2. it is informed that almost all of the respondents (84.37%) have a 3-year diploma education.

#### Knowledge

The following table shows the frequency distribution of respondents'

knowledge at the Bungah Gresik Health Center.

**Table 3. Distribution of Respondents based on Knowledge of Midwives at the Bungah Gresik Health Center**

No	Knowledge	Frequency	Percentage
1	good	19	59,37
2	poor	13	40,62
Total		32	100,00

Based on Table 3. it is informed that most of the respondents (59.37%) have good knowledge.

**Avallability of PPE**

availability at the Bungah Gresik health center

The following table shows the frequency distribution of PPE

**Table 4. Distribution of Respondents based on Availability of PPE for midwives at the Bungah Gresik Public Health Center**

No	Availability of PPE	Frequency	Percentage
1	Complete	22	68,75
2	Incomplete	10	31,25
Total		32	100,00

Based on Table 4. it was informed that almost all of the respondents (68.75%) stated that the availability of PPE at the Bungah Health Center was complete.

**2. Anxiety**

Anxiety is closely related to feelings of uncertainty and helplessness. This emotional state does not have a specific object, this condition is experienced subjectively and communicated in interpersonal relationships. Anxiety is different from fear, which is an intellectual judgment of something dangerous. The capacity

to be anxious is necessary for survival. Anxiety level is a response range that divides the individual whether included in the feeling of anxiety or not.

The method used in this study to measure anxiety is the Hamilton Anxiety Rating Scale (HARS) method developed by Max Hamilton in 1956.

**Table 5. The anxiety of midwives at the Bungah Gresik Health Center during the covid-19 pandemic**

No	Anxiety	Frequency	Percentage
1	Anxious	16	50,00
2	Not anxious	16	50,00
Total		32	100,00

Based on Table 5. it was informed that half of the respondents (50.00%) expressed anxiety and half of the

### 3. Effect of age, education, knowledge and availability of PPE on Anxiety

The results of the binary logistic regression test the influence of age,

respondents (50.00%) stated that they were not anxious.

education, knowledge, and availability of PPE on the anxiety of midwives at the Bungah Gresik Public Health Center.

**Table 6. Results of the Binary Logistics Regression Test for factors of age, education, knowledge, and availability of PPE for midwives' anxiety at the Bungah Gresik Public Health Center.**

No	Variable	<i>P-value</i>	Requirement	Description	OR
1	Age	0,000	0,05	Influence	1,877
2	Education	0,118	0,05	Not Influence	0,211
3	Knowledge	0,042	0,05	Influence	0,306
4	Availability of PPE	0,252	0,05	Not Influence	1,122

Based on Table 6. shows that age and knowledge have an influence on the anxiety of midwives at the Bungah Gresik Health Center during the covid-19 pandemic with a p-value < (0.05). With OR values of 1.877 and 0.306, which means that workers who are

on anxiety by 187.7% and workers who have good knowledge affect anxiety more by 30.6%. the education variable and the availability of PPE did not have a significant effect on the anxiety of midwives at the Bungah Health Center during the covid-19 pandemic with a p-value > (0.05).

## Discussion

### 1. Analisis Gambaran Umum Responden

Covid-19 has had a huge impact on all sectors, including the health care center sector, midwives are one of the medical personnel who is engaged in the front lines of handling maternal and child health, and play an important role in delivery assistance. Midwives must continue to interact with pregnant women directly during the COVID-19 pandemic.

This research was conducted in one

of the health centers in Gresik regency, East Java, namely the Bungah Health Center. The Bungah Health Center during the COVID-19 pandemic continues to provide basic services for the community. One of them is the Basic Emergency Neonatal Obstetric Service, which involves midwives who work at the public health center and who work at the petrified health centers in each village.

### Age

According to the Ministry of Health

of the Republic of Indonesia (2009), age is categorized into several groups, namely 1) toddlerhood (0-5 years), 2) childhood (5-11 years), 3) early adolescence (12-16 years), 4) late adolescence (17-25 years), 5) early adulthood (26-35 years), 6) late adulthood (36-45 years), 7) old age early (46-55 years), 8) late old age (56-65 years), and 9) old age (>65 years).

Most of the midwives at the Bungah Public Health Center were >35 years old as much as 68.75%, while midwives who were <35 years old were 31.25%. It can be interpreted that the majority of midwives at the Bungah Health Center during the COVID-19 pandemic were in the early adult category.

Age status influences the level of anxiety. As you get older, your reasoning and knowledge increase. A person's maturity level is one of the factors that can affect the level of anxiety where mature individuals have great adaptability to emerging stressors, and vice versa, individuals with immature personalities will depend and are sensitive to stimuli so that they are very easy to experience anxiety disorders, according to Stuart (2007). Someone who has a younger age is more likely to experience anxiety disorders than someone who is older.

#### **Education**

Table 2 explains that almost all of the midwives as much as 84.37% have a Diploma 3 education, and midwives who have a Bachelor/Diploma 4 education level are 15.62%.

Education is the influence of the environment on individuals to produce

permanent changes in behavior habits, thoughts, and traits. According to Stuart (2007). The level of individual education affects the ability to think, the higher the level of education, the easier it is for individuals to think rationally and capture new information so that low levels of education are easy to experience anxiety because higher education will affect a person's thinking ability.

#### **Knowledge**

Table 3 explains that most midwives have good knowledge of 59.37% and midwives who have poor knowledge level are 40.62%.

Knowledge is the result of human sensing or the result of someone knowing about an object through the five senses possessed. According to Stuart (2007). The level of knowledge that a person has will be able to reduce feelings of anxiety experienced in perceiving something. With one's knowledge, an individual can help solve psychological problems, including anxiety (Blanco. 2014).

#### **Availability of PPE**

During the pandemic, the availability of personal protective equipment is very much needed by medical officers who are on the front lines of patient care. Personal protective equipment is a tool that is able to provide protection against danger, personal protective equipment must be able to protect the wearer from possible dangers.

Table 4 explains that the availability of PPE at the Bungah Public Health Center was 68.75%, while 31.25% of

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midwives stated that the availability of PPE at the Bungah Health Center was incomplete.

Health workers, especially midwives, are a group that is very vulnerable to being infected with the Covid-19 virus because they are at the forefront in handling cases, especially midwives who have to provide maternal and child health services and carry out direct neonatal services which make midwives have direct contact with patients. . Therefore, the availability of PPE must be complete and in accordance with the predetermined protocol so that the anxiety experienced is reduced.

## 2. Anxiety Analysis

Anxiety is a response to a threatening situation, usually arising from the fear that something will happen. According to Stuart (2016). Anxiety is an emotional state without a specific object, anxiety is triggered by the unknown and accompanies all new experiences. Anxiety disorders are the most common mental disorders, anxiety can be understood as a pathological part of normal fear (Adwas. 2019).

The COVID-19 pandemic has become a health problem that has a major impact on individuals and community groups. Health workers are a group that is vulnerable to being infected with the COVID-19 virus, especially midwives who must go directly to the front line in providing maternal and child health services, as well as providing neonatal services to

pregnant women, this allows midwives to be directly exposed.

Table 5 describes the level of anxiety as measured by the HARS method, that 50.00% of the population of midwives at the Bungah Gresik Health Center experienced anxiety while the other 50.00% did not experience anxiety. Midwives feel anxious because of the demands of their work which have to deal directly with patients when providing primary care, and there is an incomplete PPE available at health services in the village. Symptoms of anxiety experienced by midwives are feeling tense, having trouble sleeping, feeling excessive fear,

Edni's research. 2020. Those using the GAD 7 (Generalized Anxiety Disorder-7) anxiety gauge show that most respondents do not experience anxiety (55.2%), and less than half of respondents experience mild anxiety (36.2%). In another study, also showed that most of the anxiety levels experienced by health workers were mild anxiety with the number of respondents being 65.2% (Fadli. 2020).

Another study conducted by Askoy on the Psychological Effects of Nurses and Midwives due to the Covid-19 outbreak in Turkey in 2020, stated that midwives had a fairly high level of anxiety with a percentage of 36.3% while anxiety and fear each had a percentage of 31.3% and 19.4%. The anxiety level of medical personnel is above the average value of 48.71%, this is due to age, work experience, chronic illness suffered, work shifts during a pandemic, and diagnostic

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measures taken to Covid-19 patients (Tosun. 2021).

### 3. Analysis of the influence of age, education, knowledge and availability of PPE on Anxiety

Of the four factors that have a significant influence on the anxiety of midwives at the Bungah Gresik Public Health Center, age and knowledge are factors. Meanwhile, the education factor and the availability of PPE did not have a significant effect on the anxiety of the midwife at the Bungah Gresik Public Health Center.

The results of this study indicate that there is a significant influence between age on the anxiety of midwives at the Bungah Health Center, with a p-value (0.000) and an OR value of 1.877, which means that midwives with age <35 years have more influence on anxiety by 187.7%. This is because someone who has an easier age is more likely to experience anxiety disorders than someone who is older.

This research is in line with research conducted by Fadli (2020). The age of the midwife has an influence on anxiety with a p-value (0.030), where almost all ages ranging from <30 years (39.1%) and >30 years (26.1%) experience anxiety. Another study revealed that there was an effect of late adulthood on coping mechanisms with anxiety with a p-value (0.005) (Puspanegara. 2019). In a study conducted by Cai (2020). Stating that anxiety in medical personnel aged 31-40 years is relatively high, this is because medical personnel is worried

that they will transmit the disease to their families at home.

The results of this study indicate that there is a significant influence between knowledge on the anxiety of midwives at the Bungah Health Center, with a p-value (0.042) and an OR value of 0.306, which means that midwives who have good knowledge affect anxiety by 30.6%. It can be interpreted that the higher the level of knowledge of the midwife, the less likely it is to experience anxiety, this is because a person's high knowledge can help to solve problems so that it can reduce the possibility of anxiety occurring.

Research conducted by Sögüt (2020). The level of knowledge does not have a significant effect on the anxiety of the midwife. With a p-value (0.48). Meanwhile, research was conducted by Fadli (2020). Stating that there is a significant effect between knowledge on the anxiety of health workers with a p-value (0.030) with a percentage of 8.7%. This is the same as the research conducted by cag (2020). Which states that there is a significant effect between knowledge on the anxiety of front-line health workers with a P-value (0.005). Similar results were obtained in a study conducted by Lei (2020). There is a significant effect between the level of knowledge on the anxiety of radiology officers during the covid-19 pandemic with the p-value (0.049).

The level of knowledge that a person has will be able to reduce feelings of anxiety experienced in perceiving something. With one's

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knowledge, an individual can help solve psychological problems, including anxiety (Blanco. 2014). Meanwhile, according to Regina (2020). Good knowledge about COVID-19 does not guarantee that the anxiety experienced must be mild. On the other hand, if you have sufficient knowledge about COVID-19, you will not necessarily experience severe anxiety.

This study shows that there is no significant effect between the level of education on the anxiety of midwives at the Bungah Health Center, with a p-value (0.118) and an OR value of 0.211. The level of education is not the main determining factor for the occurrence of anxiety in midwives at the Bungah Health Center during the Covid-19 pandemic. Educational background does not affect a person's level of anxiety, because the level of one's educational status cannot affect perceptions that can cause anxiety.

The results of this study are similar to the results of Liu's (2020) study. Education does not have a significant effect on the anxiety of medical workers who are struggling against covid-19, with a p-value (0.223). Similar results were presented in Lei's (2020) study. The results of statistical tests in the study have a P-value (0.125) which means that the education level of workers in the radiology department has no significant effect on the occurrence of anxiety.

The concept presented by Stuart (2007). Stating that the level of individual education affects the ability

to think. The higher the level of education, the easier it is for individuals to think rationally and capture new information, so the higher one's education, the higher one's knowledge in overcoming a problem.

This study shows that the availability of PPE does not have a significant effect between the availability of PPE on the anxiety of midwives at the Bungah Health Center, with a p-value (0.252) and an OR value of 1.122. The availability of adequate PPE makes the midwives at the Bungah Health Center less anxious. Adequate personal protective equipment facilities for midwives are very important, this is because midwives are vulnerable to being exposed to COVID-19, they provide maternal and child health services and provide direct neonatal services to patients, therefore the availability of PPE is very important.

The results of this study are not in line with the research conducted by Fadli (2020). Which states that there is a significant effect of the availability of PPE on the anxiety of health workers with a p-value (0.14). This is supported by research conducted by Cheng (2020). Of the 13 respondents experienced anxiety because the supply of PPE has not been met when taking action to patients.

During the initial spread of the COVID-19 virus, health care facilities had limited personal protective equipment. Therefore, many health workers feel confused and unprepared to treat patients (Huang. 2020). This makes them feel insecure, helpless, isolated, and difficult to manage the

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workload, which in turn can lead to several emotional and psychological disorders such as anger, anxiety, insomnia, and stress (Giusti. 2020)

## CONCLUSIONS

The results of this study are that of the four factors that affect the anxiety of midwives, only age and knowledge have a significant influence on the anxiety of midwives at the Bungah Health Center. <35 years and midwives with good knowledge are at risk of experiencing anxiety by 0.3 times greater than midwives with poor knowledge. Meanwhile, the education factor and the availability of PPE in this study did not significantly affect the anxiety of midwives at the Bungah Health Center. It is recommended that the management of the public health center need to prevent the occurrence of anxiety in midwives so that midwives do not feel anxious when performing primary maternal and child health services and neonatal services.

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