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The Relationship Of Knowledge And Attitude Of Mothers Of Newborn Babies Regarding Congenital Hypothyroid (SHK) Screening At Kayu Laut Health Center, Panyabungan Selatan District Christmas Mandiling

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ABSTRACT

Congenital Hypothyroidism Screening, for short, is a screening to select babies who suffer from Congenital Hypothyroidism (HK) from babies who are not sufferers. All babies born in Indonesia must be screened for Congenital Hypothyroidism (SHK) to detect if there is a risk of abnormalities in the child's growth and development. The aim of this study was to determine the relationship between knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroidism Screening (SHK). This type of research uses quantitative research with correlational methods. The population in this study was 41 mothers who had newborn babies. The sampling method in this research used total sampling. Data collection uses a questionnaire. Data analysis used the chi square test. The results of the analysis show that the analysis of the relationship between knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroid Screening (SHK) showed that of the 7 respondents who had good knowledge about SHK, all 7 people (17.1%) had positive attitudes. quite a majority had a positive attitude as many as 18 people (43.9%). Meanwhile, of the 12 respondents who had less knowledge, 8 people (19.5%) had a negative attitude. The results of the chi-square statistical test prove that there is a significant relationship between the knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroidism (SHK) Screening at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency, with p value = 0.002 ($p<0.05$).

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1. INTRODUCTION

Every family hopes that their children will grow and develop optimally, both physically, mentally/cognitively and socially (Soetjinigsih, 2019). Growth and development are two different events but cannot be separated. Often parents do not realize when their children experience delays in growth and development. Generally, during this period, growth and development disorders in children that are often found include physical disorders, motor development, language and behavior (Sandy, 2019).

The world community has paid serious attention to thyroid disorders which prompted the proclamation of International Thyroid Awareness Week in 2009, which was initiated by the International Thyroid Observation Organization or Thyroid Federation International. This is done to remind the entire world community of the importance of awareness regarding diseases caused by thyroid disorders (Latifa, 2020).

Congenital Hypothyroidism (HK) is a condition of decreased or non-functioning of the thyroid gland that occurs when the baby is born. This occurs due to anatomical abnormalities or metabolic disorders in the formation of thyroid hormones or iodine deficiency. Congenital Hypothyroidism Screening, for short (SHK), is a screening/screening test to select babies who suffer from Congenital Hypothyroidism (HK) from babies who are not sufferers (Minister of Health of the Republic of Indonesia 2020). In most cases, congenital hypothyroidism can be permanent. Congenital

hypothyroidism can cause long-term adverse effects, especially mental retardation (Saran, 2019).

Throughout the world, the prevalence of Congenital Hypothyroidism (HK) is estimated to be close to 1:3000 with a very high incidence in areas of iodine deficiency, namely 1:3000-900. The prevalence of HK in Japanese people is 1:7,600, while in the black population it is very rare. The prevalence of Congenital Hypothyroidism (HK) in the UK shows a higher incidence in children of Asian descent. Meanwhile, based on gender, the incidence of Congenital Hypothyroidism (HK) is twice as high in girls compared to boys. In Asian countries, the incidence rate in Singapore is 1:3000-3500, Malaysia 1:3026, the Philippines 1:34600, Hong Kong 1:2404. The incidence rate is easier in Korea, 1:4300 and Vietnam, 1:5502 (Indonesian Ministry of Health, 2019).

From the results of a 7 year study in Northern Iran from June 2009 to March 2016 a total of 269,088 live newborns underwent Congenital Hypothyroidism Screening, and 548 babies were diagnosed with primary hypothyroidism (1 per 491 births). Eight infants (1.5%) died before diagnosis of Congenital Hypothyroidism. The diagnosis of Congenital Hypothyroidism was not possible in seven babies (1.3%) due to migration, eighty babies (14.8%) were born before 37 weeks of gestation (Abbas et al, 2018).

The growth status of Congenital Hypothyroid children showed that 65.7% were in good physical growth condition, 13.1% were slow growing, and 6.6% were overweight. Around 176,250 babies were examined until March 2014, and the Congenital Hypothyroid type was definitely diagnosed in 389 children (prevalence 1 per 453 births), 169 of whom suffered from permanent Congenital Hypothyroidism (prevalence 1 per 1,043 births) and 220 suffered from temporary Congenital Hypothyroidism. The prevalence rate of Congenital Hypothyroidism in North Irian is estimated at 1 per 491 live births, which is very high compared to other countries in Asia, Europe and America. The prevalence rate of Congenital Hypothyroidism is 1 per 650 births in Turkey, 1 per 1,600 births in Pakistan, and 1 per 3,692 births in Saudi Arabia (Abbas et al, 2018).

Indonesia does not yet have national data, there is only data on selected hospitals in Indonesia, namely Cipto Mungunkusumo Hospital (Central Jakarta), Hasan Sadikin Hospital (Bandung), M Djamil Hospital (Padang), Sultan Imanuddin Hospital (Central Kalimantan), Hospital Sardjito General Hospital (DI Yogyakarta), Soetomo Hospital (Surabaya, East Java), Karyadi Hospital (Semarang), Adam Malik Hospital (Medan), Hoesin Hospital (Palembang), Dr IG Ngoerah Hospital (Denpasar), Dr Wahidin Sudirohusodo (Makasar), Dr RD Kandouw Hospital (Manado) which carried out Congenital Hypothyroidism Screening from 2014 to 2019. The screening results showed 85 positive babies out of 213,669 babies with a ratio of 1:2513 births. It appears that this figure is higher than the global prevalence of 1:3000 births (Anggraini, Fatmasari, & Suryawati, 2019).

Other data obtained from a review of medical records at endocrine clinics in 2021 shows that 70% of babies were diagnosed with congenital hypothyroidism over 1 year old and 2.3% were diagnosed under 3 months of age. Of the 2.3% of babies experiencing minimal growth and development retardation, while 70% experience permanent mental retardation (Indonesian Ministry of Health, 2022). Since 2000-2013, screening has been carried out in 11 provinces in Indonesia on 199,708 babies with high results of 73 cases (1:2736). If the projected birth rate is 5 million babies per year, it can be estimated that more than 1600 babies with HK will be born every year (Anggraini, Fatmasari, & Suryawati, 2019).

More than 1-7 million people in Indonesia have the potential for thyroid disorders. Data collected by the Endocrinology Work Coordination Unit of the Indonesian Ministry of Health from 2000-2013, Indonesia had 1:2,736 positive cases of thyroid disorders in newborn babies. This number is higher compared to the global ratio of 1:3000 births (Radhia, 2021).

According to the World Health Organization (WHO), the number of disabled people in Indonesia is estimated at 7-10% of the population of 210 million who have impaired communication skills (approximately 10,500,000), 16.8% have hearing impairment (34,280,000) and 0.4% suffer from deafness (840,000). This can be caused by congenital influences (biological factors), environmental factors (nature), or a combination of the two. One biological factor that can hinder a child's growth and development is the presence of thyroid function abnormalities such as hypothyroidism. The incidence of hypothyroidism in Indonesia is estimated to be much higher, greater than 1:1,500 live births (Dwi,

Fendrawati, & Fidyawati, 2022).

The prevalence of children with mental retardation in Indonesia is estimated at 1-3% of the total population of Indonesia experiencing mental retardation or 6.6 million people, of this number of children affected by mental retardation 2.8%, 2.6% of children with moderate retardation, and 2.6% of children with mental retardation. mild mental illness or weakness of mind as much as 3.5% (Indonesian Ministry of Health, 2021).

The incidence of mental retardation is generally only detected at an older age. However, it is estimated that there are 10-15 per 1000 children in developing countries. In Western countries, the prevalence of mental retardation is estimated to be around 1-3%. Global Burden of Disease data states that the prevalence of mental retardation in the world in 2007-2017 increased by 12.9% and still amounted to 188,585 in 2017. In Indonesia, according to the 2011 Social Protection Program Data Collection (PPLS), as many as 30,460 children out of a total of 130,572 suffer from it. mental retardation. Data is spread throughout Indonesia with the largest provinces in Central Java, East Java and West Java (Cahyaningsih & Indah, 2022).

From 2000-2005, 55,647 babies were screened at Hasan Sadikin Hospital (RSHS) and 25,499 babies at Cipto Mungunkusumo Hospital (RSCM), with an incidence rate of 1:3528 births, so that in the 2006 Healthy Technology Assessment (HTA) convection, Based on research conducted at Cipto Mungunkusumo Hospital (RSCM) and Hasan Sadikin Hospital (RSHS), as many as 70% of congenital hypothyroidism diagnoses were only discovered in children aged 1 year. At that age, the brain disorders that occur are permanent and growth disorders occur that cannot be reversed. This delay in diagnosis is because children suffering from congenital hypothyroidism rarely show clinical symptoms early in life (Dwi, Fendrawati, & Fidyawati, 2022). In the same study it was also found that less than 5% could be recognized before the age of 3 months and that treatment could minimize growth and development retardation. The health department approves Congenital Hypotheroidism Screening for all newborns (Dwi, Fendrawati, & Fidyawati, 2022).

The government's seriousness about this program is stated in health regulation number 78 of 2014 concerning Congenital Hypothyroid Screening which regulates the management of Congenital Hypothyroid Screening (SHK) activities. Apart from that, other financial support for Congenital Hypothyroid Screening (SHK) is regulated in the Decree of the Minister of Health number HK.01.07/MENKES/1511/2021 concerning Technical Guidelines for the Implementation of Midwifery and Neonatal Services. Health services during pregnancy, childbirth and Congenital Hypothyroid Screening conform to the issuance of Minister of Health Regulation number 3 of 2021 concerning Health Service Standards in the Implementation of the Health Insurance Program. The Ministry of Health will fulfill SHK financing for all Community Health Centers with a calculation of needs based on the target number of babies born from the Data Center (Pusdatin) (Indonesian Ministry of Health, 2021).

Congenital Hypothyroidism (SHK) Screening has been socialized in 14 provinces in Indonesia, namely, West Sumatra, DKI Jakarta, West Java, Central Java, Yogyakarta, East Java, Bali, South Sulawesi, South Kalimantan, North Sumatra, North Sulawesi, Aceh, Kalimantan East, and Lampung until 2014. The Congenital Hypothyroidism (SHK) Screening Program in Lampung province started in 2016 in Metro City (Anggraini, Fatmasari, & Suryawati, 2019).

In the running of the Congenital Hypothyroidism (SHK) Screening program from 2016-2017 in Lampung, the number of BBL reported to have been screened was around 2000 BBL (New Born Babies), or 42% of the total of 4,748 BBL, this percentage is still far from the expected target. namely 100 percent or total BBL, the results of Congenital Hypothyroidism Screening in the city of Bandar Lampung are highest in tidal topographic areas (24%), in wavy to undulating areas 18%, and lowest in hilly to mountain areas (15%). In general, the results of Congenital Hypothyroid Screening in Bandar Lampung City are 18%, the highest in Tanjung Karang Timur District (41%) (Anggraini, Fatmasari, & Suryawati, 2019).

Data from the Central Statistics Agency for East Java Province 2019 shows that there are 29 districts and 9 municipalities, the number of births is 573,928, in the West 21,544 low birth babies, malnutrition 6,195. The estimated target for babies in 2021 is around 500,000 (Betty et al, 2021).

Based on Basic Health Research, the percentage of Congenital Hypothyroid Screening (SHK) in North Sumatra province is 65.51%. The highest percentage was in Simalungun Regency, showing 86.09%. Data results in Mandailing Natal Regency show that 68.52% of Congenital Hypothyroidism Screening at birth (Riskesdas Mandailing Natal Regency, 2018). All babies born in Indonesia must be examined for Congenital Hypothyroidism Screening (SHK) to detect if there is a risk of abnormalities in the child's growth and development. This is one of the government's programs in implementing the transformation of primary care which emphasizes promotive and preventive efforts considering that the majority of cases are Congenital Hypothyroidism. does not show symptoms, so parents are not aware of it. New typical symptoms appear as the child gets older (Indonesian Ministry of Health, 2022).

In practice, Congenital Hypothyroidism Screening is carried out by taking blood samples from the heels of babies aged at least 48 to 72 hours and a maximum of 2 weeks by health workers at health service facilities providing maternal and child health services (both FKTP and FKRTL), as part of neonatal services. essential. 2-3 drops of blood are taken from the baby's heel and then examined in the laboratory. If the results are positive, the baby must be treated immediately before he is 1 month old to avoid disabilities, growth and development disorders, mental and cognitive retardation (Indonesian Ministry of Health, 2021).

Based on the initial survey conducted by researchers on October 17 2021 by asking for data about babies who underwent Hypothyroid Screening at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency, researchers obtained data and counted the number of babies who underwent Hypothyroid Screening, as many as 10 people. 7 mothers responded well, 3 mothers did not respond well to their babies being screened for hypothyroidism. From the description above, researchers are interested in conducting research on "The Relationship between Knowledge and Attitudes of Mothers of Newborn Babies Regarding Congenital Hypothyroidism (SHK) Screening at the Kayu Laut Community Health Center, South Panyabungan District, Mandailing Natal Regency in 2021".

2. METHOD

This type of research uses quantitative research with correlational methods. Correlational quantitative research is research using statistical methods that measure the influence between two or more variables regarding the relationship between mothers' knowledge of newborn babies regarding congenital hypothyroid screening (SHK).

This research was conducted at the Kayu Laut Health Center, South Panyabungan District, Mandailing Natal Regency. This research was carried out from October to January 2021. The population in this study was 41 mothers who had newborn babies. The sample is part of the population that will be used for research. The sample in this study was mothers who had newborn babies, and the sampling method in this study used total sampling where the entire population was sampled. The sample size in this study was 41 mothers who had newborn babies.

3. RESULTS

In this chapter, the research results and research discussion are described regarding the relationship between knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroid Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency in 2021. This research was conducted on 41 mothers of newborn babies. at Kayu Laut Health Center in 2021.

Univariate Analysis

Characteristics in research include age, education, occupation, sources of information, knowledge and attitudes which can be explained in the following table:

Frequency Distribution of Respondents by Age at Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency, 2021

No	Age	Frequency	%
1	< 20 Years	6	14.6
2	20 – 35 Years	23	56.1

No	Age	Frequency	%
3	>35 Years	12	29.3
	Total	41	100.0

The table above shows that the majority of respondents are aged between 20-35 years, namely 23 people (56.1%) and the minority of respondents aged < 20 years is 6 people (14.6%).

Frequency Distribution of Respondents based on Education at Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency, 2021

No	Education	F	%
1	elementary school	2	4.9
2	JUNIOR HIGH SCHOOL	14	34.1
3	SENIOR HIGH SCHOOL	20	48.8
4	College	5	12.2
	Total	41	100.0

In the table above, it can be seen that the most respondents had a high school education, namely 20 people (48.8%) and the least number of respondents had an elementary school education, namely 2 people (4.9%).

Frequency Distribution of Respondents by Occupation at Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency, 2021

No	Work	F	%
1	IRT	21	51.2
2	Farmer	2	4.9
3	Self-employed	14	34.1
4	Civil servants	4	9.8
	Total	41	100.0

The table above shows that the most respondents worked as Housewives (IRT) as many as 21 people (51.2%) and the least number of respondents worked as farmers as many as 2 people (4.9%).

Frequency Distribution of Respondents based on Information Sources at Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency, 2021

No	Resources	F	%
1	Print media	9	22.0
2	Social media	20	48.8
3	Health workers	12	29.3
	Total	41	100.0

The table above shows that the majority of respondents got their information sources from social media, namely 20 people (48.8%) and the minority of respondents got their information sources from print media, namely 9 people (22.0%).

requency Distribution of Knowledge of Mothers of Newborn Babies about Congenital Hypothyroidism (SHK) Screening at Kayu Laut Community Health Center, East Panyabungan District, Mandailing Regency Natal 2021

No	Knowledge	F	%
1	Good	7	17.1
2	Enough	22	53.7
3	Not enough	12	29.3
	Amount	41	100.0

The table above shows that the majority of respondents have sufficient knowledge about Congenital Hypothyroid Screening (SHK), namely 22 people (53.7%) and the minority of respondents have good knowledge, namely 7 people (17.1%).

Frequency Distribution of Attitudes of Mothers of Newborn Babies regarding Congenital Hypothyroidism (SHK) Screening at Kayu Laut Community Health Center, Panyabungan Timur District, Mandailing Regency Natal 2021

No	Mother's attitude	F	%
1	Positive	29	70.7
2	Negative	12	29.3
	Amount	41	100.0

The table above shows that the majority of respondents have a positive attitude about Congenital Hypothyroid Screening (SHK), namely 29 people (70.7%) and the minority of respondents have a negative attitude, namely 12 people (29.3%).

Bivariate Analysis

To test the relationship between independent variables which include age, education, employment, sources of information with the dependent variable, namely the knowledge of mothers of newborns about Hypothyroid Screening (SHK) using bivariate analysis using the chi-square test with α=0.05 which is described as follows:

Relationship between Mothers' Knowledge of Newborns About Congenital Hypothyroidism (SHK) Screening Based on Age

Mother's Age	Mother's Knowledge						Total		*p-value*
	Good		Enough		Not enough				
	F	%	F	%	F	%	F	%	
<20 years	0	0.0	2	4.9	4	9.8	6	14.6	
20-35 years	2	4.9	14	34.1	7	17.1	23	56.1	0.020
>35 years	5	12.2	6	14.6	1	2,4	12	29.3	
Total	7	17.1	22	53.7	12	29.3	41	100.0	

The table above shows the relationship between maternal knowledge about Congenital Hypothyroidism Screening (SHK) based on age. It was found that of the 23 respondents aged 20-35 years, the majority had sufficient knowledge about Congenital Hypothyroidism Screening (SHK), 14 people (34.1%). Furthermore, the majority of respondents aged < 20 years had insufficient knowledge, 4 people (9.8%). Meanwhile, the majority of respondents aged >35 years had sufficient knowledge, 6 people (14.6%). The results of the chi-square statistical test prove that there is a significant relationship between the knowledge of mothers of newborns regarding Congenital Hypothyroidism Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency based on age, with a p value = 0.020 (p<0.05) .

Connection Knowledge MotherNewborns About Congenital Hypothyroidism (SHK) Screening Based on Education Level

Education	Mother's Knowledge						Total		*p-value*
	Good		Enough		Not enough				
	F	%	F	%	F	%	F	%	
elementary school	0	0.0	1	2,4	1	2,4	2	4.9	
JUNIOR HIGH SCHOOL	0	0.0	6	14.6	8	19.5	14	34.1	
SENIOR HIGH SCHOOL	4	9.8	13	31.7	3	7.3	20	48.8	0.013
Go.High	3	7.3	2	4.9	0	0.0	5	12.2	
Total	7	17.1	22	53.7	12	29.3	41	100.0	

The table above shows an analysis of the relationship between knowledge of mothers of newborn babies about congenital hypothyroid screening (SHK) based on education, it was found that of the 20 respondents with high school education, the majority had sufficient knowledge, 13 people (31.7%). Furthermore, most of the respondents with tertiary education had good knowledge, namely 3 people

(7.3%). Meanwhile, the majority of respondents with junior high school education had less knowledge, 8 people (19.5%). The results of the chi-square statistical test prove that there is a significant relationship between the knowledge of mothers of newborn babies about Hypothyroid Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency based on education, with p value = 0.013 (p <0.05).

Results of Analysis of the Relationship between Mothers' Knowledge of Newborns About Congenital Hypothyroidism (SHK) Screening Based on Occupation

Work	Mother's Knowledge						Total		*p-value*
	Good		Enough		Not enough				
	F	%	F	%	F	%	F	%	
IRT	4	9.8	9	22.0	8	19.5	21	51.2	0.016
Farmer	0	0.0	1	2,4	1	2,4	2	4.9	
Self-employed	0	0.0	11	26.8	3	7.3	14	34.1	
Civil servants	3	7.3	1	2,4	0	0.0	4	9.8	
Total	7	17.1	22	53.7	12	29.3	41	100.0	

The table above shows an analysis of the relationship between knowledge of mothers of newborn babies regarding Congenital Hypothyroid Screening (SHK) based on occupation, it was found that 9 people (22.0%) of the 21 mothers who worked as housewives had sufficient knowledge. Furthermore, the majority of respondents who work as entrepreneurs have sufficient knowledge, 11 people (26.8%) while the majority of respondents who work as civil servants have good knowledge, 3 people (7.3%). The results of the chi-square statistical test prove that there is a significant relationship between the knowledge of mothers of newborn babies about Congenital Hypothyroid Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency based on occupation, with p value = 0.016 (p<0.05).

Results of Analysis of the Relationship between Mothers' Knowledge of Newborn Babies About Hypothyroid Screening (SHK) Based on Information Sources

Resources	Mother's Knowledge						Total		*p-value*
	Good		Enough		Not enough				
	F	%	F	%	F	%	F	%	
Print media	0	0.0	4	9.8	5	12.2	9	22.0	0.003
Social media	1	2,4	13	31.7	6	14.6	20	48.8	
Health workers	6	14.6	5	12.2	1	2,4	12	29.3	
Total	7	17.1	22	53.7	12	29.3	41	100.0	

The table above shows the results of the analysis that of the 20 mothers who obtained information from social media, most of them had sufficient knowledge, 13 (31.7%). Furthermore, the majority of respondents who obtained information from health workers had good knowledge, 6 people (14.6%) and the majority of respondents who obtained information from print media had poor knowledge, 5 people (12.2%). The results of the chi-square statistical test prove that there is a significant relationship between the knowledge of mothers of newborns regarding Congenital Hypothyroid Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency based on the source of information, with a p value = 0.003 (p<0.05).

Results of Analysis of the Relationship between Mothers' Knowledge of Newborn Babies About Congenital Hypothyroidism (SHK) Screening Based on Education Level

Mother's Knowledge	Attitudes about SHK				Total		*p-value*
	Positive		Negative				
	F	%	F	%	F	%	
Good	7	17.1	0	0.0	7	17.1	
Enough	18	43.9	4	9.8	22	53.7	0.002
Not enough	4	9.8	8	19.5	12	29.3	
Total	29	70.7	12	29.3	41	100.0	

The table above shows an analysis of the relationship between knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroid Screening (SHK). It was found that of the 7 respondents who had good knowledge about SHK, all 7 people (17.1%) had positive attitudes. quite a majority had a positive attitude as many as 18 people (43.9%). Meanwhile, of the 12 respondents who had less knowledge, 8 people (19.5%) had a negative attitude. The results of the chi-square statistical test prove that there is a significant relationship between the knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroidism (SHK) Screening at the Kayu Laut Community Health Center, South Panyabungan District, Mandailing Natal Regency in 2021, with p value = 0.002 (p<0.05).

Discussion

Relationship between Mothers' Knowledge of Newborns About Congenital Hypothyroidism (SHK) Screening at Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency Based on Education

The results of the study showed that the analysis of the relationship between knowledge of mothers of newborn babies regarding congenital hypothyroid screening (SHK) based on education showed that of the 20 respondents with high school education, the majority had sufficient knowledge, 13 people (31.7%). Furthermore, most of the respondents with tertiary education had good knowledge, namely 3 people (7.3%). Meanwhile, the majority of respondents with junior high school education had less knowledge, 8 people (19.5%). The results of the chi-square statistical test prove that there is a significant relationship between the knowledge of mothers of newborn babies about Hypothyroid Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency based on education, with p value = 0.020 (p <0.05).

The educational level of mothers of newborn babies can influence their level of knowledge about Congenital Hypothyroid Screening (SHK), as in this study, there were 20 respondents with a high school education level (48.8%) and 5 respondents with a tertiary education level (12 .2%), because usually the higher a person's education, the better their level of knowledge. However, this does not mean that someone with low education has absolutely low knowledge, because knowledge is not only obtained from formal places but can also be obtained from the experiences of other people around them (Mubarak, 2010).

Based on educational material factors, so far mothers have only received formal education with general material and not about health. Most mothers have never received material related to congenital hypothyroid screening at a formal education level. So it is possible that there is no influence of education level on the mother's attitude towards congenital hypothyroid screening. According to Sartain, environmental factors include the conditions and nature of the world which in certain ways can influence a person's behavior regarding something. The mother is in a living environment where the surrounding community has not been exposed to information regarding congenital hypothyroid screening (Deriyatno, et al., 2019).

According to the researcher's assumption, education is closely related to the mother's level of knowledge about Congenital Hypothyroidism Screening (SHK), where it is expected that someone with higher education will have more extensive knowledge, especially about Congenital Hypothyroidism Screening (SHK).

Relationship between Mothers' Knowledge of Newborns About Congenital Hypothyroidism (SHK) Screening at Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency Based on Occupation

Based on the results of univariate analysis, it was found that the mothers of newborn babies who were the most respondents worked as Housewives (IRT) as many as 21 people (51.2%). The results of the analysis show that there is a relationship between the knowledge of mothers of newborn babies about Congenital Hypothyroid Screening (SHK) based on occupation, where of the 21 mothers who work as housewives, the majority have sufficient knowledge, 9 people (22.0%). Furthermore, the majority of respondents who work as entrepreneurs have sufficient knowledge, 11 people (26.8%) while the majority of respondents who work as civil servants have good knowledge, 3 people (7.3%). The results of the chi-square statistical test prove that there is a significant relationship between the knowledge of mothers of newborn babies about Congenital Hypothyroid Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency based on occupation, with p value = 0.016 ($p<0.05$).

The majority of respondents who lacked knowledge about the indications for screening for congenital hypothyroidism were housewives (housewives). According to Nursalam (2020), the knowledge of respondents who work is better than respondents who do not work. All this is because mothers who work outside the home (formal sector) have better access to various information.

Based on the data obtained, there is a picture of the suitability of the theory that work is an activity carried out by a person, especially to support his life and that of his family so as to produce an income in the form of money. The work of pregnant women not only shows their socio-economic level but also shows that they exist in certain organizations with the assumption that working mothers have higher knowledge and receive information more quickly than mothers who do not work (Yuliana, 2017).

Based on the author's assumption, most pregnant women who do not work have less knowledge, this is because respondents who do not work do more activities at home, and have full responsibility for taking care of the family, so that knowledge about Congenital Hypothyroid Screening (SHK) which is something new to the respondents knows, while mothers who work will generally gain experience and knowledge both directly and indirectly in the work environment, as well as have better access to various information, including health so that they have more knowledge and experience.

Relationship between Mothers' Knowledge of Newborns About Congenital Hypothyroidism (SHK) Screening at Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency Based on Age

The research results showed that based on mother's age, it was found that the most respondents were aged between 20-35 years, namely 23 people (56.1%) and the least respondents were aged < 20 years, namely 6 people (14.6%). The results of data analysis show the relationship between maternal knowledge about Congenital Hypothyroidism Screening (SHK) based on age, it was found that of the 23 respondents aged 20–35 years, the majority had sufficient knowledge about Congenital Hypothyroidism Screening (SHK), 14 people (34.1%). Furthermore, the majority of respondents aged < 20 years had insufficient knowledge, 4 people (9.8%). Meanwhile, the majority of respondents aged >35 years had sufficient knowledge, 6 people (14.6%). According to researchers, the older a person is, the more mature their thinking patterns will be and the broader their knowledge will be. The results of the chi-square statistical test prove that there is a significant relationship between the knowledge of mothers of newborns regarding Congenital Hypothyroidism Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency based on age, with a p value = 0.020 ($p<0.05$) .

According to researchers, a person's knowledge is influenced by many factors ranging from life experience, age, level of education and environment, both living and working environments. These factors will shape a person's knowledge about a matter which will determine how a person responds to a problem. Because the better the postpartum mother's knowledge about congenital hypothyroidism, the better the postpartum mother's attitude towards Congenital Hypothyroid Screening in newborns.

Relationship between Mothers' Knowledge of Newborn Babies About Congenital Hypothyroidism (SHK) Screening at Kayu Laut Health Center, Panyabungan Selatan District, Mandailing Natal Regency Based on Information Sources

The results of the analysis show that of the 20 mothers who obtained information from social media, the majority had sufficient knowledge, 13 (31.7%). Furthermore, the majority of respondents who obtained information from health workers had good knowledge, 6 people (14.6%) and the majority of respondents who obtained information from print media had poor knowledge, 5 people (12.2%). The results of the chi-square statistical test prove that there is a significant relationship between the knowledge of mothers of newborns regarding Congenital Hypothyroid Screening (SHK) at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency based on the source of information, with a p value = 0.003 ($p<0.05$).

Based on the research results, it was found that the level of knowledge of pregnant women who were respondents was in the sufficient category. Respondents' knowledge in this case can be influenced by several factors. Factors that influence knowledge about information received, close friends, parents, and social media. The factor that might influence is discussion. Our society in general already has media to get information easily. The information medium is an Android smartphone which is very easy. In his research, it is stated that accessing information via Android media is quite effective and its use is quite satisfactory because it supports needs. (Deriyatno, et al., 2019).

This is also in accordance with the results of research conducted by Audrey et al, 2019, some parents actively seek information, for example reading books, while others learn about newborn screening by studying abnormal test results from their babies. Sources of information were obtained from health workers (nurses, doctors, laboratory technicians), books, magazines, brochures, prenatal classes and popular media. 26% learned about newborn screening during hospitalization (birth), especially when blood specimens were taken (12%), 13% of parents recalled receiving information from health professionals before birth, 4% received information from the literature, and about 6% were not informed or do not remember receiving any information about newborn screening.

According to the researcher's assumption, the source of information most widely known by respondents is the source of information from social media. Because everyone already has a source of information from their Android cellphone, especially about newborn screening. So by accessing information about newborn screening they will gain knowledge about Congenital Hypothyroidism (SHK) Screening.

Relationship between Knowledge and Attitudes of Newborn Mothers Regarding Congenital Hypothyroidism (SHK) Screening at Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency

The results of the analysis show that the analysis of the relationship between knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroid Screening (SHK) showed that of the 7 respondents who had good knowledge about SHK, all 7 people (17.1%) had positive attitudes. quite a majority had a positive attitude as many as 18 people (43.9%). Meanwhile, of the 12 respondents who had less knowledge, 8 people (19.5%) had a negative attitude. The results of the chi-square statistical test prove that there is a significant relationship between the knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroidism (SHK) Screening at the Kayu Laut Community Health Center, South Panyabungan District, Mandailing Natal Regency in 2021, with p value = 0.002 ($p<0.05$).

The results of this study are in line with Deriyatno, et al., (2019) that there is a statistically significant correlation between mother's knowledge and attitude towards congenital hypothyroid screening, the strength of the correlation is moderate with a positive correlation direction. In this study, most respondents had a moderate level of knowledge about congenital hypothyroid screening. The better the mother's knowledge, the better the mother's attitude towards congenital hypothyroid screening.

According to researchers' analysis, a person's attitude will influence health behavior, health behavior is influenced by the information received. A person's positive attitude will produce positive health behavior as well. A positive attitude here is a mother who has the correct attitude regarding

congenital hypothyroid screening (tendency to screen for congenital hypothyroidism). Mothers who have good information will make mothers understand the importance of hypothyroid screening in babies and will show a supportive attitude towards baby hypothyroid screening.

4. CONCLUSION

Most of the knowledge of mothers of newborn babies regarding Congenital Hypothyroidism (SHK) Screening at Kayu Laut Community Health Center, South Panyabungan District, Mandailing Natal Regency has sufficient knowledge, namely 22 people (53.7%). The attitude of mothers of newborns regarding Congenital Hypothyroidism (SHK) Screening at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency mostly has a positive attitude, namely 29 people (70.7%). There is a significant relationship between the knowledge of mothers of newborn babies about Congenital Hypothyroid Screening (SHK) based on education at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency in 2021, with a p value = 0.013 ($p<0.05$). There is a significant relationship between the knowledge of mothers of newborn babies about Congenital Hypothyroid Screening (SHK) based on work at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency in 2021, with a p value = 0.016 ($p<0.05$). There is a significant relationship between the knowledge of mothers of newborn babies about Congenital Hypothyroid Screening (SHK) based on age at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency in 2021, with a p value = 0.020 ($p<0.05$). There is a significant relationship between the knowledge of mothers of newborn babies about Congenital Hypothyroid Screening (SHK) based on information sources at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency in 2021, with a p value = 0.003 ($p<0.05$). There is a significant relationship between the knowledge and attitudes of mothers of newborns regarding Congenital Hypothyroidism (SHK) Screening at the Kayu Laut Community Health Center, Panyabungan Selatan District, Mandailing Natal Regency in 2021, with p value = 0.002 ($p<0.05$). It is hoped that health workers, especially midwives, when providing counseling and counseling to pregnant women in the third trimester, are not only limited to the third trimester of pregnancy, not only limited to pregnancy and preparation for childbirth, but also provide counseling and education about screening for newborns, both for pregnant women. whose babies are at risk of suffering from congenital hypothyroidism or those who are not at risk, so that parents will be encouraged and motivated to want to carry out screening for their babies. So that respondents can increase their knowledge about Congenital Hypothyroidism so that it will reduce anxiety and fear when Congenital Hypothyroid Screening is carried out and accept and participate in Congenital Hypothyroid Screening carried out on their babies in the future.

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