

Childhood Ethnoepidemiology in the Context of Cosmology Java

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Abstract. Every community has a knowledge system to respond to their symptoms of illness, including symptoms and illness experienced by children under five. Unfortunately, the symptoms of illness experienced by a child can not be interpreted by the sufferer, so often the response given by adults around them is not in by following the symptoms experienced. Consequently, not a few illnesses experienced by a child become fatal. In this context, research is focused on the study of ethnoepidemiology of children under five and its relation to the socio-cultural environment of the local community in Tanggulangin. This research explores and analyzes field findings with inductive thinking logic. On that basis, this study uses qualitative data collection methods with in-depth interviews and observation techniques. Tanggulangin villagers perceive the type of pain experienced by children under five different from teenagers, adults and the elderly. Even so with the concept of healthy-sick and etiological illness of children under five. The difference is influenced by the socio-cultural environment that has implications for parental responses in preventing and doing the healing. Before the modern medical system developed, the etiology of the disease of children under five years was much influenced by environmental and cultural conditions, both physical and non-physical. Based on the analysis, the etiology of child's disease in Tanggulangin community can be classified into three, namely natural pain, illness due to the personal system, and illness due to intervention from the modern medical system. While the response of parents when children under five are sick between different generations experience differences. The older generation is more dominant to the traditional medical system and the current generation is dominant to modern medicine. But for some cases, the use of traditional and modern medical systems is done consecutively. This is due to the development of modern health services and education, but the community has not been able to leave the cultural aspects.

Keywords: Etiology Of Childhood Diseases, Ethnoepidemiology, Javanese Cosmology

1. Introduction

Every community has a knowledge system to respond to their symptoms of illness. The response is influenced by environmental systems, knowledge, experience, and culture that exists in society. Various problems arise when an illness is experienced by children, especially children under five years old or commonly called a child. In the process, children under five are quite susceptible to various diseases [1], ranging from nutritional deficiencies and excesses to the care of children who are not suitable for their developmental age [2]. The high morbidity experienced by a child is caused by a child's immune system being processed towards perfection. Therefore, children under five become vulnerable to various diseases [3]. Such conditions are not widely known by the public, because the community considers that the illness experienced by a child is a part that must be passed by children in the transition to

adolescence. Uniquely, the event of the illness was even considered as a symptom of the child becoming more resourceful [4], so that the parents did not respond as a serious illness, but rather as a 'normal' disease. When the illness shows serious symptoms, the parents will respond seriously through self-medication and go to a healing practitioner.

Various knowledge and experiences in medicine will try to be applied to respond to illness experienced by a child. Unfortunately, the symptoms of illness experienced by children can not be interpreted by the sufferer, so often the responses given by adults around him are not by following the symptoms suffered by children. Consequently, not a few illnesses experienced by a child result in death. In a variety of research that has been done, research on a child is still concentrating on the issue of vaccine delivery and nutritional status. While child's health or illnesses suffered by a child as a contribution to cultural behavior and environmental influences are still very minimal.

Based on the description above, this study looks at how diseases that occur in infants are interpreted in a cultural perspective that is heavily influenced by the physical and non-physical environment. In this context, research is focused on the study of the ethnoepidemiology of children under five, specifically about diseases in a cultural perspective by the local community Tanggulangin, Montong District, Tuban District, East Java.

Many studies discuss the disease in children under five, from illness caused by malnutrition, viruses, bacteria, to illness due to inappropriate parenting at the age of five. Some studies that have reviewed it, such as those conducted by Elisanti [5]. Elisanti stated that child nutrition is one of the health problems that is influenced by social and demographic conditions. From the results of his research, Elisanti revealed that there were three regions of the lowest nutritional status of children under five, that is in the East, Southeast Sulawesi and North Maluku regions. While regions that have good (high) nutritional status are DIY, DKI Jakarta and North Sumatra.

Another literature that discusses the child's illness is a study conducted by Purniti et al [6] on the people of Bali, Indonesia. His research is focused on the incidence of pneumococcal a child and the impact of pneumonia on a child by *S. pneumoniae* PCR examination. According to him, this type of disease is the type of disease that most cause death in infants. Both the research conducted by Elisanti and Purniti still see the common illness suffered by children under five in a modern medical perspective. While the socio-culture and environmental aspects of the community are still ignored. Whereas the socio-cultural and environmental aspects of the community also influence the emergence of various types of diseases suffered by children under five.

One literature that has looked at socio-cultural aspects in child's disease is research conducted by Agustina [7] about malnutrition in children under five. The results of his study stated that the condition of malnutrition suffered by children under five is a social-cultural contribution. Also, economic conditions, cultural eating, and myths that develop in society. In a subsequent study, it was also explained that children at the age of five are at risk as a result of cultural patterns. This research was conducted in the Dani community [8]. Unfortunately, the cultural approach has not been able to reveal a variety of typical diseases suffered by children aged under five. These studies still explain how the cultural contribution to the illness experienced by children under five. While the symptoms of pain, etiology, and treatment system is not much attention. With the above research mapping, this research aims to fill research gaps that have not been widely studied by previous researchers, namely regarding the study of ethnoepidemiology in children under five. In this context, it will be explored about the concept of health and illness of infants, the etiology of typical diseases in children under five, prevention, and care.

2. Research Method

Subjects who become research analysis is the good family relatives who are already married and new families who have gotten married and descent. To be able to uncover how the informant constructs the concepts of health, sickness, and recovery which have implications for the response when the child is sick, research is conducted comprehensively on several research focuses. So that the results of the study can be holistic, it also looks at how the relationship between the concept and the etiology of the disease of children under five is based on traditional and modern medical experiences that exist in the Tanggulangin Village community.

Data collection techniques began with a literature study, observation, and interviews. The data collection system that researchers use, refers to one saturation principle. If the data obtained from the informant does not provide updated information or is already saturated, then the interview is stopped because it is considered sufficient [9]. This research was conducted for one month with 15 informants and used various triangulation techniques.

In the data analysis process, there are main components that must be really understood, namely data reduction, data presentation, and drawing conclusions or verification [10]. To analyze a variety of data that already exists, researchers used a descriptive-analytic method. Data analysis was carried out in a qualitative inductive manner along with the data collection process. Furthermore, in the process of analysis will use an analytical ethnographic approach with thick description.

3. Result and Discussion

3.1 Environmental Influences on Pain Events and Their Treatment

There is no society without culture. Every community has a unique culture following the experience of the people who are influenced by their environment, both physical and non-physical. Community interaction with the macrocosm world has implications for life experiences that can guide the lives and continuity of society in the future. In this context, people create a culture based on their environmental influences. The environment provides energy for the community to be strategic in maintaining its survival so that the concepts and strategies for survival are formed, although not a few concepts and strategies are not counted. These concepts and strategies are included in how the community survives in a healthy state, as well as the Tanggulangin Community.

The health of Tanggulangin society is very important. They have an utterance in Javanese language that "*Ora sehat ora ngopo-ngopo*" (in English: unhealthy does not do any activities), is a condition that is feared by the community. Consequently, various efforts will be made by the community to obtain or maintain a healthy condition, especially efforts in a cultural context. These efforts are usually carried out every time to coincide with the day and birth certificate of the person concerned. The effort is called *Brokohan*. *Brokohan* is done as a form of gratitude for the abundance of sustenance and health that has been obtained by individuals. Aside from being a form of gratitude, *Brokohan* is also carried out to ask for prayers to God to get health, sustenance, and fluency in carrying out their duties as human beings on earth. Besides, *Brokohan* in the context of Tanggulangin community is one way to accommodate with God and other supernatural forces in the community. *Brokohan* every coincided with the day and birth carried out as a form of hope for self- safety in maintaining and achieving positions that are considered valuable, including health status. This was done because

originally Tanggulangin Village was in the middle of a forest that was still "*singit-nyengit*" (in English: dangerous and sacred). Many forest dwellers are believed to be a source of disease. These sources are creatures outside of human power and strength, so humans form a magical collaboration with the natural authorities to always get protection, remember, people cannot escape from life in the forest. Some of the activities carried out in the forest are looking for firewood, gardening, and herding.

Community interaction in the forest can be a cause of the sick community. From several incidents of pain obtained by the community, humans began to form ethics when interacting in and with forests. One of them, by not making a fuss and conveying the permission by saying the utterance in Javanese language "*amit-amit*" in some places that are considered "*singit-nyengit*" (writing in English: dangerous and sacred). These erratic conditions make people maintain health and safety through supernatural channels by begging directly to the natural ruler, both human nature and supernatural nature beyond human capabilities. Because these conditions are conditions that cannot be predicted by humans. Something that cannot be predicted is dealt with by cooperating with supernatural agents through a set of rules to maintain harmony in life between the human world and outside of humans, for example by doing *Brokohan* and salvation rituals when they are sick so that the source of disease immediately leaves and the sufferer will immediately recover.

The activity carried out by the community above is an effort to maintain health, not only for people who are sick but also for children who have never been sick. Based on the informant's explanation, children become victims of the supernatural disease. The high mortality rate of children under five in the Tanggulangin Village community is an infant mortality event as a consequence of perception, environmental influences, and cultural actions of the community. Perceptions such as those described above make cultural actions that have been passed down from generation to generation and have implications for the high mortality of children under five. It was only in the era of the late 1990s that these cultural actions were not widely practiced because of the existence of a better modern medical system. Although the pain is still found in children under five to date, the treatment system is better so that very few are fatal in children under five. Besides, community awareness factors regarding obstetrical care and assistance by the modern medical system in the village have also begun to be good. Nevertheless, culturally the two conceptions of both traditional and modern medical systems are still a space of learning and are still practiced today.

3.2 The Concept of Healthy- Children's Illness in Cultural Perspective

Every community has experienced painful events, both as a taste and as a disease. From traditional societies to the most modern societies, from rural communities to urban communities with their various civilizations always accompanied by the emergence of various diseases suffered by humans, including diseases of children under five. Every community has a different perspective in responding to the pain they suffer. It is influenced by a healthy concept of pain in different societies. In modern society with its tradition of rationality responding to pain by self-medication and going to modern health services. While in rural communities, respond in different ways. Villagers have different ways of responding because the concepts of healthy and sick are influenced by local cultural perspectives. Even so in the Tanggulangin village community.

For Tanggulangin Village community, the concept of illness in infants is not the same as humans in general. According to them the illness of children under five is different from human diseases in general. Many illnesses experienced by children under five cannot be found

when they are growing up in adolescents, adults, and the elderly. The concept of sick children and a child according to the community is always characterized by children get fever, fussy, difficulty of sleeping, decreased appetite/loss appetite, and frequent crying. If some of these signs are present in a child, then the child can already be said to be sick and usually the response of parents is to call a smart person to calm a crying of a child, and provide modern medical and local treatment.

The conditions and indicators of illness above certainly differ from the concept of pain for humans in general (adolescents-adults), that is when a person can still carry out his role as he should, someone has not considered himself sick. Although sometimes symptoms of pain have been felt (like have a cold, cough, fever, and headaches), but people have not declared themselves stricken with the disease. However, if the child has a cold and often cries, then the condition has been said to be sick of the child. Such conditions are due to the limitations of parents and the community to understand and detect the disease in the child's condition. While for the condition to recover from illness, the community conceptions that a sick a child will recover when the child has slept soundly, not fussy (crying), and is not got a fever. Society rarely goes to modern medicine when there is an indication of healing in those children. As a traditional medical practice (to smart people; *Dongke* [11]) the society knows '*Mendokke*' treatment. '*Mendokke*' is the treatment that is carried out twice to *Dongke* so that the health of sick children recover soon. If the child has gotten recover from their fever and crying, the child is considered cured. While psychologically, the child is considered cured if appetite is normal, does not cry often, has played as usual, and sleep has returned soundly. Thus, the child is said to be healthy when calm, no fever, and no crying, good appetite, sleep well. In such conditions, children and a child are said to be healthy. Even physical indicators are often used as healthy children, namely body weight. Usually, if the child has a thin body, then the community considers the child to be unwell. Meanwhile, if a child has a fat body, people claim the baby is healthy.

3.3 Etiology of Disease in Childs Based on Local Knowledge

Diseases in children have different characteristics because children are still very passive to disease agents. In addition, the condition of children is still very vulnerable, especially in the formation of antibodies and endurance formed through cultural activities in the perspective of society towards children and their magical world. Even so, that is in the Tanggulangin village community.

Tanggulangin Village Community has its classification regarding the causes of sickness in children under five. This classification can be identified through (a) looking at the physical symptoms of the body, (b) the child's reaction to illness, and (c) the child's physical and reaction to the symptoms of illness. All these events are then felt and infused by the parents (through *nyondro* activity), until it is determined where the cause of illness suffered by the child. Also, in such conditions also involve practitioners of traditional and modern medical systems that exist in the community, because of the limited knowledge and experience of the community to detect and classify the causative sources of illness in children under five. This condition is like what was conveyed by Mr. Mun in Javanese language:.

“Nek anak rewel, nangis, karo panas ya biasane dicelokke Dongke Mas. ... biasane disuwuk terus ora nangisan. Soale bocah nangis kui mau urung karuan perkoro panas tapi kadang kenek-kenek, kadang ya diganggu sing momong, kenek sawan mbarang.

.... *Nek bar disuwuk biasane kari panase... nek urung mari ya sesuk e dicelokke bidan sesuk e*".

(in English) "If my son got a fever, often cry, usually I called *Dongke* Mas. Usually, the *Dongke* prayed for my son to God, and my son already stops crying. Because the child cries are not necessarily because of fever, but it could be due to magical objects, sometimes disturbed by a frivolous, because of convulsions too. If a child got a prayer from *Dongke*, usually it will be immediately recovered... if the child still got a fever, so I will bring my son to midwife".

The case above is also experienced by Mrs. Tun, but sometimes parents already know before being taken to the midwife or called *Dongke*. Parents usually see the condition of a sick child using natural cultural and cosmological experiences. If children can get '*Sawan*', *Sawan* is various types of diseases that come suddenly, such as convulsions, buttoned mouth, etc. Then they will immediately called the *Dongke*, especially if the symptoms of the illness indicate that the child has '*Siji*' disease. '*Siji*' disease is a kind of disease similar with '*Sawan*'. It is various types of diseases that come suddenly, such as convulsions, buttoned mouth, etc. Then parents go directly to smart people who can cure '*Siji*' disease with prayer techniques. Different conditions experienced by Mr. Yud's family, if a child is sick the child will immediately be responded to for treatment by using a modern medical system. For example, when the child is catching a cold. But, if the symptoms of illness indicate pain due to magical objects, then the child will also be given traditional medical treatment through *Dongke*.

Based on the analysis of illness cases for children under five, it can be classified as the etiology of disease in children under five in Tanggulangin Village community, namely:

1. Natural Pain

The source of disease in this group is due to disruption of the balance of elements in the body that causes children to become sick. Such as fever, colds, and '*Damblagen*'. *Damblagen* itself has a meaning that is a type of disease in which the skin becomes red as if irritated. Such conditions are heavily influenced by the environment and community activities.

2. Pain Disorders

The source of pain that causes children under five is sick is due to personalistic factors. This factor is due to the existence of a source of the disease that attacks children, both those controlled by humans and magic, so the child becomes sick. Types of sick children in this category are sick because of interference with evil spirits, and that child's illness called '*Siji*' disease. The source of this disease can come from forests, rice fields, or other sacred places.

3. Artificial

Based on people's perceptions, in this modern era, the type of pain in children occurs due to the implications of modern system interventions. Types of sick children under five in this category are heat sick because of the introduction of the virus in children, for example through smallpox injections in children.

Types of diseases in infants in Tanggulangin Village community are formed from the local culture and cosmopolitan culture, so the classification of a childhood disease in numbers 1 and 2 is the classification of a child disease from the local culture. Menu Foster and Anderson [12] the etiology of disease number 1 is called naturalistic systems and the etiology of disease

number 2 is called personalistic systems. While the classification of a child's disease at number 3 is a new type of ill understanding from the Tanggulangin community due to contact, intervention, infiltration of knowledge, and practice of the modern medical system. For the people inTanggulangin, public disclosure and acceptance of health practices outside its local culture have implications on the type of disease suffered by children under five. With the change in knowledge and practice of modern medicine, the community can assess the impact of the emergence of a new disease etiology in infants based on the understanding of the local community. However, if further understood the intervention factors of knowledge and practice of modern medical treatment such as the introduction of vaccines in Bali which are understood as symptoms of artificial pain by the public can be classified into the etiology of diseases in naturalistic systems by Foster and Anderson. The entry of fluids or objects from outside a child's body in vaccination efforts from the modern medical system causes the balance of elements in the child's body to be disrupted and cause pain in a child. This situation is understood by the community as a source of new diseases that were not found before based on the context of the local community's knowledge.

3.4 Parent's Response to Children's Disease

"Different Generation First Response Difference"

A clause above is a description of how the parents in Tanggulangin Society in responding to symptoms and illness in children under five. Generational differences have major implications for the response of parents in providing treatment when a child is sick, especially children under five. The old generation is more dominant in traditional medical practices, while the current generation is more dominant in the practice of modern medical systems. It happens because of differences in knowledge and education. However, the difference is not so visible because of the experience when a child is very determined parents' choices to immediately respond to recover quickly. In addition, rural communities who are entering a period of transition cannot be classified in a strict black and white manner. The current generation chooses to go to modern medicine also does not guarantee to survive in the modern medical system alone, based on local and cultural knowledge about the handling of children's pain, causing the current generation to not be able to leave the traditional medical system, whether using special practitioners (eg *Dongke*), as well as in general (for example using herbal ingredients such as turmeric). Even so, with the dominant old generation going to the traditional medical system, one cannot ignore the modern medical system.

Based on the above statement, the form of parental responsibility when a child is sick can go through various channels, namely (1) herbal medicine/self-medication, (2) bringing it to the modern medical system, and (3) taking it to the traditional medical system. If the response is made in the matrix of different parents' different generation responses, then it can be presented in the following table:

Table 1. Different Parent Response Matrix Different Generations when a Child is Sick

The response	Older Generation Parents	New Generation of Parents
Symptoms of pain	<i>Self-medication</i> (utilizing herbal medicine / plants / kitchen ingredients)	<i>Self-medication</i> (drug store)
Early-stage pain	Traditional medical	Modern medical
Late-stage pain	Traditional-modern medical (dominant traditional)	Modern medical-traditional medical (modern dominant)

From table 1. It can be stated that differences in parental responses from different generations are largely determined by differences in knowledge and experiences of responding to children when sick. In the case of symptoms of illness, the old generation uses local knowledge to respond to sick children through the use of herbal plants, such as turmeric, honey, and moringa leaf. While the new generation uses more drug stalls or pharmacies to cure children suffering from symptoms of illness. In the second aspect, the older generation is more inclined to the traditional medical system, while the new generation tends to use modern medical services to respond to sick children. In the last aspect, if the child is still not healed with previous treatment, both the old and new generations will make various efforts to get their children to be nurtured, including complementary medicine between the modern medical system and the traditional medical system.

4. Conclusion

Based on the explanation of the research findings, it can be concluded that the type of disease in children under five in Tanggulangin Village community has a special character when compared with diseases in adult humans. This character is a combination of the natural cosmological context of rural community thinking, the implications of the environment, and the use of modern medical systems that exist in society. The illness of children under five that occurs in society generally occurs due to the aggression of diseases from natural systems and personalistic systems. A various disease that causes illness in children is responded in different ways by the parents of children. Differences in response occur because of different knowledge systems in different generations. In the older generation, when a child is a sick society dominant responds her to go to the traditional medical system, but in the generation of newly discovered their dominant tendency to go to the modern medical system. Uniquely, in several types of diseases and to get the recovery of children under five, complementary medicine between traditional and modern medical systems is often done, both those that require special practitioners and those who do not. This is done to get the child's fertility quickly, so various efforts are made by parents in responding to the child when sick.

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