



Knowledge, Attitude, and Practice of Parents of Under-Five Children with Otitis Media at the Mampong Municipal Hospital, Ghana

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Abstract: *The study assessed the knowledge, attitude, and practice of parents of under-five children on otitis media using the Mampong Municipal Hospital. The study used a descriptive qualitative approach. Purposive sampling was used to select 15 participants. Interview guide was employed to gather data and analyzed thematically. It was found that parents were aware of otitis media through health centers but called it in their own local dialect with different names. Otitis media is caused by children putting things in their ear, playing together, improper bathing of children, swimming, overcrowding, and corporal punishment. It can affect the hearing ability, communication, sleeping, appetite, academic performance, and damage the brain for a long time. Moreover, parents believed that otitis media can be cured. Parents identified health care services as the best way to treat otitis media. Healthcare centres in collaboration with District Health Directorate should organize frequent education to nursing parents as well as ante natal attendants on otitis media, symptoms and preventive measures.*

Keywords: Paediatrics, Mampong Municipal Hospital, Parents, Otitis Media.

1. INTRODUCTION

Otitis media (OM) remains a common condition that sends children to the hospital. It contributes enormously to the prescription of antibiotics among childhood ailments in primary health care (Qureishi *et al.*, 2014). The increased use of antibiotics for the treatment of Otitis Media is more evident in developed countries (DeAntonio *et al.*, 2016). Otitis media is an infection of the middle ear that bacteria and viruses can cause. The most common bacteria isolated in otitis media cases are; Streptococcus pneumonia, Staphylococcus aureus



and Haemophilus influenza. It can be subdivided into four subcategories, which are based on onset, duration and presence or absence of discharge. These four groups include; Acute otitis media (AOM), recurrent Acute Otitis media, Otitis media with effusion (OME), and Chronic Suppurative Otitis media (CSOM) (DeAntonio *et al.*, 2016). AOM presents with local and systemic signs and has a rapid onset, and is a leading cause of antibacterial treatment for children in developed countries. Although, OM can be indicated among all ages, children are known to be more prone to the disease than adults, with the peak age being 6months to 36months (Qureishi *et al.*, 2014). Also, some factors predispose children to otitis media including; parental smoking and exposure to wood smoke, Upper Respiratory Tract Infection (URTI), Daycare schooling, poor breastfeeding practices, familial tendency, overcrowding, cleft palate, immunosuppression, and other childhood diseases such as measles, and pertussis (Ilechukwu *et al.*, 2014).

The prevalence of Otitis media in children is relatively high. It has been established that at about 50% - 80% of children, by the age of 3years would have experienced at least an episode of OM. The prevalence rate of OM recorded across some sections of countries globally among children under 6years is 9.2% in Nigeria, 10% in Egypt, 6.7% in China, 9.2% in India 9.1% in Iran, and 5.1% - 7.8% in Russia (DeAntonio *et al.*, 2016). Concerning the treatment of OM, Acute OM is thought to be self-limiting within 2 – 14 days of infection (Lieberthal *et al.*, 2013). According to the United States of America's guideline on the treatment of OM, it suggests the principle of 'wait and see'. This is to assess the self-limiting nature of the condition before the use of antibiotics. The mortality rate is known to be low (Qureishi *et al.*, 2014). However, its effect and/or complications can be unpleasant. Some of these include; hearing loss, negative learning ability and limited scholastic achievement (DeAntonio *et al.*, 2016). The perception of parents on Otitis media is very influential in the treatment of the disease. Ilechukwu *et al* (2014) indicated increased risk of complications coupled with poor management could be the outcome of late or missed diagnoses.

To compliment the efforts of health personnel, parents' knowledge and perception on the condition is essential. It is of this view that this study is being conducted. The theory of reasoned action posits that a person's behavior is determined by their intention to execute a particular behaviour. It helps to show the link between attitudes and behaviors of parents of patients under 5years with otitis media disease (Fishbein & Azjen, 1975). There is paucity of empirical evidence on Otitis Media regarding parents' attitude and preventive practices on Otitis media in Ghana, especially in the Ashanti Region. Therefore, the study sought to explore parents' knowledge, attitude and care seeking practice on Otitis Media of children under five years old in Mampong Municipal.

2. METHODOLOGY

The study was conducted at the Ashanti Mampong Government Hospital of the Mampong Municipal Assembly in the Ashanti Region of Ghana. A descriptive of the qualitative approach was used which enabled the researcher to give a snapshot of parents' knowledge, attitude, and practice on otitis media. The study targetted parents of children under 5years. Inclusion criteria were parent of patients under the age of 5 years who have been diagnosed



with Otitis media at the Mampong Municipal Hospital. Exclusion criteria were parents whose child(ren) had been diagnosed with otitis media but older than 5 years. Also, parents of children under 5 years who had been diagnosed of other ear, nose and throat conditions were excluded from the study. Moreover, parents who were less than 18 years old were excluded from the study. A purposive sampling was adopted to select 15 participants to form part of the study. Indeed saturation was reached with the 15th participant. Pre-testing was done at the ENT unit of Agona Government Hospital using five participants and the results helped fine-tune the instrument (interview guide) for actual data collection. The Mampong Municipal Authority and the Ashanti Regional Ministry of Health granted permission to use the health facility and patients for the study due to following the laid down procedure in conducting health research in health facility. The Researchers were tasked to organize an awareness forum to explain all the pros and cons to the participants and obtain written/verbal consent before any participants could be included in the study. Participants were also made aware of the “no coercion and no reward clause”, ability to withdraw at any time without any suffrages and no invasion of privacy deception. Participants were interviewed individually using the interview guide and tape recording were made. The language used during the interview was mostly Asante Twi, which is widely spoken in the area. However, English was used for only few who preferred it. The data collection process lasted for two weeks, after which data was made ready for analysis. Credibility and trustworthiness were ensured. The data were subjected to content analysis, thus bringing out recurring themes. The results were presented in themes guided by the research objectives. Moreover, direct quotations from participants were used to support the findings of the study.

3. RESULTS AND DISCUSSION

Background information on the Respondents

It was found that 13 of the participants were females while few (2) were males. Majority of the participants were found below 50 years, thus, from 30 to 49 years. This was the active fertility period. Eight of the participants were married, 4 was co-habiting while 3 were divorced. Christians dominated in the study while Moslem were three (3). Almost half of the participants have Diploma/HND education, followed by 4 participants who have SHS education while few (2) of the participants have degree.

Knowledge of Parents on Otitis Media

Data gathered shows that majority (13) of the participants had heard about Otitis Media with only few (2) voicing out that they had not heard of it. However, participants could explain Otitis Media in the local language. Even those who initially indicated that they had not heard of Otitis Media, upon hearing the name in the local language, were able to give a description. Most of them knew it as just problem of the ear, boil in the ear, fluid in the ear, “fonie” bad ear or painful ear. In most of the local dialect, it is known to the participants as “Aso fiti”. In spite of the fact that a significant number (5) had heard of Otitis media for the first time; upon taking their children to the hospital for treatment, about half knew about it while in school. These were confirmed in the following excerpts:

“Yes, I know about Otitis media. I got to know it when my grandchild complained about his ear pains and I took him to hospital and the nurse told me that he has an Otitis media.” (55



year old grandmother – Participant 1) A different view was shared by a participant; “No, I did not know anything about Otitis media. My child just complained about her ears, I could also see some fluid out of her ears sometimes so I told my husband about it and he said we should take her to the hospital. When I got there, she was examined and the nurse told me that her middle ear is burst.” (41 year old mother – Participant 5) “Yes, please. My child was coughing and had running nose and I took him to hospital but one doctor told me to take him to ENT to examine him and see for it could be an Otitis media.” (28 year old mother – Participant 3) Thiw was corroborated by another participant; “Yes, I know about Otitis Media when in school, because back at Nursing Training College, I learnt Ear, Nose and Throat as a course and through that Otitis Media was treated as one of the diseases of the ear.” (33 year old mother – Participant 8).

Causes and Predisposing factors of Otitis Media

When asked about the causes of Otitis media, quiet a number (9) confused themselves with the predisposing or risk factors. After clarification, they could not make mention of the causes. However, some (3) of those who were health personnel were able to indicate the causes. The causes were mentioned to be infections, bacteria, viruses and fungi. With respect to the predisposing factors, almost (14) all participants were able bring out some factors. A little over a third (6) of the participants believed that putting things, dust and fingers into the ear could lead to Otitis Media. Others (3) believed that Otitis media is caused by swimming, playing of bad games or water getting into children’s ears as a result of bathing. Running nose, sore throat, coughing, manhandling of the ears or hand and slapping of children were posited by some (4) participants. Almost (13) all participants were of the view that overcrowding especially at pre-school classrooms contributes immensely to Otitis Media in children under five years. The following were what some participants said; “I know that Otitis Media can be caused by bacteria and viruses, but I am not so sure if fungi can also cause it” (38 year old father – Participant 2) “Otitis media is caused by children putting things (dust or fingers) in their ears. For my child, his brothers reported to me that they saw him putting things in his ears while they were playing. He denied it but for the subsequent days, I saw some water coming out of his ear and he could not hear properly when I call him at home. That is when that I saw that there was a problem with his ear”. (31 year old mother – Participant 4) “I believed that may be when I bath him and some water enters his ear. Also, my child went to swim in some water with his friends and in that night he could not sleep. When you talk to him and it pains him and felt so bad with noise. So that was the cause of my son’s ear problem, Otitis media.” (26 year old mother – Participant 14) “As for my child, I believe he got it from school because his school was closer to a water body that they swim in. In addition the class was overcrowded and the school environment was not good. He normally had high temperature hence we had to be visiting the hospital frequently. So upon advice from a woman nearby, I withdrew my child from the school and since then the frequent sicknesses have reduced. (30 year old mother – Participant 15) “I think the disease is caused by dirt. Also, when children start attending pre-school, they turn to be diagnosed of Otitis media when they become ill and are taken to the hospital for treatment. I believe that overcrowding in pre-school class is a contributing factor” (42 year old mother – Participant 7)



Effects of otitis media on children

Almost (14) all the participants were able to give some signs and symptoms, while quite an appreciable (10) number went ahead to explain some complications that may result from the disease. It was gathered that, fever, pain, excessive crying, loss of appetite and ear discharge were how Otitis Media affects children. All the participants indicated that Otitis Media can lead to hearing loss, with one further indicating that death and another citing that Meningitis, facial palsy and abscess can be complications of the disease. On the other hand, majority (12) of the participants alluded to the fact that Otitis media can affect hearing and communication and intelligence of children. Also, a few were able to establish the link between otitis media affecting the brain. The following were some of the responds:

“It affects children in many ways. It can damage their hearing, makes them cry and lose appetite. For my child, he used to cry for minutes continuously without doing anything. He could not eat, sleep, learn or even play with other people. And I learned from some nurses that it can even damage the brain especially among parents who do smoke... (32 year old mother – Participant 10) “The result of Otitis media can be hearing loss... It can also affect the brain because the middle ear is connected to the brain, so if there is an infection in the brain, there is the likelihood of affecting the brain. And this can consequently impact on the child’s intelligence. It can affect their intelligence because when the teacher speaks in class, it would be difficult for the child to hear due to hearing loss. Also, because the child could barely hear properly, I have to shout and he also does same in an attempt to make each other hear the other during communication” (37 year old father – Participant 12) “Lack of sleep due to pain can be one of the effects. I believe that Otitis media can affect some children’s academics as they are unable to go to school.”(30 year old mother – Participant 6)

Attitude of Parents Towards Prevention of Otitis Media in Their Children

Participants were able to respond to questions which sought to assess their attitude toward Otitis Media in children. This was based on whether Otitis media was curable and preventable.

Otitis Media Being Curable

Almost all (14) the participants except one alluded to the fact that Otitis media is curable. Their views were based on the experience they had gotten when their children were down with the disease. Some of the participants shared their views as follows; “Yes, I believe that Otitis media is curable because when I took my child to the hospital and she was diagnosed of it, in about three days, my child was up and about feeling good after treatment” (34 year old mother – Participant 13) “Yes, it is curable because after my child had been treated, there has not been any incidence again.”(30 year old mother – Participant 6) “Yes, it is curable because it is caused by infection; therefore, with the right antibiotics, it can be cured. However, complications can make that difficult.” (38 year old father – Participant 2) “I do not think so. My husband believed that it was a spiritual issue and not a normal sickness so we took our child to the northern region for herbal medicine. I have been to many places in the northern region and applied different herbs but sill I did not see any difference in the healing of my daughter. Even, my husband told me that it is spiritual sickness, that’s why I do not worry myself with drugs.” (27 year old mother – Participant 9)



Prevention

Among the participants for the study, 13 of the participants were of the view that otitis media can be prevented while a participant was not sure that it can be prevented and a participant has no idea on whether it can be prevented or not. Among the 13 participants who believed that otitis media can be prevented, the predominant preventive factors were reduction of class population for pre-schoolers, ensuring proper hand hygiene and avoiding inserting or putting things into the ear. A few (3) were of the view that when children are taken to the hospital early, otitis media could be prevented. Other factors that came up also were stopping swimming, early treatment of related conditions such as sore throat and common cold. Comments passed by participants include; “Early treatment of cold and sore throat, avoiding cold drinks and putting of hands in the ears can prevent Otitis Media”. (28 year old mother – Participant 3) “The nurse told me that I should avoid water from getting into the ear in order to prevent recurrent Otitis Media. I also think that trimming down overgrown nails can contribute to otitis media prevention” (30 year old mother – Participant 15) “Schools should ensure that classroom of pre-schoolers should be decongested to reduce infections; by so doing children will be free from Otitis Media. Through this knowledge, I went to my ward’s school to advise them on overcrowding of the children.” (37 year old male father – Participant 12)

Care Seeking Practice of Parents on Otitis Media

It centred on where participants took their children to when they were down with the disease, home management, and their satisfaction with hospital treatment. Also, participants were given opportunity to advice their fellow parents on health seeking practices relating to Otitis Media.

Place of Reporting Infections and Home Management

Views shared by participants revealed that most (13) of them reported to the hospital when their children had infections such as Otitis Media while 2 of the participants got drugs from over the counter. That notwithstanding, a number of them also made mention of resorting to herbal medication (2) and over-the-counter medications (5) for the treatment of their children’s ailments. Also, in responding to the place of reporting infections, participants shared the manner in which they managed Otitis media among their children. Though, about a third of the participants barely did anything to their children before reporting them to the hospital, a number (7) of them gave medications including herbal treatment before taking their wards to the hospital. Antipyretics, especially paracetamol was mostly used at home to bring down temperatures and pain whilst a few (3) used antibiotics. Some tepid sponged their children at home. These were what participants had to say; “I reported to the hospital after I had tepid sponged and given syrup Paracetamol and Amoxiclav. I did these in the house because my child was complaining of pain in the ear. I have these medications in the house but upon giving them the symptoms were still persisting.” (33 year old mother – Participant 8) “My wife told me that it was a boil in my child’s ear so we went to drug store and bought a spirit ear drop, though someone had advised us of using herbal preparations. Upon further deliberations, I decided to report my child to the hospital and do away with the spirit ear drop all together. So no medication was used before reporting at the hospital. (37 year old father – Participant 12) “When my child took ill with the complaints of ear pains, I took him to my



village where my mother proposed the use of herbal treatment. After some days of treatment, there was no improvement so I gave syrup paracetamol to bring down the fever and later sent him to the hospital.” (34 year old mother – Participant 13) “I treated my child with ‘Maame Dagomba’ as suggested by my mother and within 3 days the boil in the ear burst. However, after the ear was discharging, I took my child to the hospital. (31 year old mother – Participant 4)

Satisfaction with the Hospital Care and Best Treatment for Otitis Media

It is worth saying that all participants alluded that the care rendered to them at the hospital was satisfactory, with some being very enthused when describing their experience. They all indicated that their responses were not influenced by the fact that they were being reviewed by a nurse or being at the hospital. Again, all participants agreed with the exception of one who was shy to give an answer, opined that the best treatment for otitis media was reporting to the hospital for specialist care. Some of the comments indicated included; “I was very satisfied with the treatment given me at the hospital because within some few days my grandchild was able to eat again – the medications were good. The best treat for otitis media is to send your child to the hospital... it is not because I am in the hospital because, but from the way my child is doing well, no one has persuade me into saying something different” (55 year old grandmother – Participant 1) “I was very satisfied because the ENT nurse gave me some free medications, which I thank her for that. I believe that the best treatment is to adhere to preventive measures and seeking early treatment since not all fever result from Malaria” (38 year old father – Participant 2)

4. DISCUSSIONS

Knowledge of Parents

The study revealed that participants had appreciable knowledge on the condition; though quiet a number of them confused ear pain to be synonymous to Otitis Media. It can be deduced that the knowledge displayed was partly due to participants’ level of education and their previous experience with Otitis Media. This assertion is in accordance with a study by Alharbi et al (2019) who attributed parents’ higher knowledge on Otitis Media to their higher education level and economic status. Despite the appreciable knowledge of parents in this study, only a handful were able to correctly state the causes of Otitis media to be bacteria and viruses, as Iiechukwu et al (2014) outlined them. This was similar to a study by Hansen, Howlett and Hoffman (2015) who asserted that parents did not have an accurate understanding of causes of Acute Otitis Media. That notwithstanding, though confused with the causes of OM, participants were able to mention a good number of the risk factor of OM. These included; running nose, sore throat, coughing, manhandling of the ears or hand slapping of children, putting things, dust and fingers into the ear, swimming, playing of bad games and water getting into children’s ears as a result of bathing. Participants in Malene et al (2015) study mentioned most of the factors indicated in the study. These risk factors are confirmed in the article by Iiechukwu et al (2014).



Attitude of Parents Towards Prevention of Otitis Media in Their Children

Participants agreed that Otitis media was curable because if early treatment is sought, within few days children will recover from the disease. This assertion influence and make parents optimistic that once they report to the hospital, particularly at the ENT department, they are assured of early recovery and cure of their children from Otitis media. Participants were able to mention a number of preventive measures which included; reduction of class population for pre-schoolers, ensuring proper hand hygiene, avoiding inserting or putting things into the ear, stopping swimming, and early treatment of related conditions such as sore throat and common cold. Their knowledge on the preventive measures will help them develop positive attitude in the prevention of the disease altogether. Khalid et al (2017) research on knowledge, attitude and practices towards otitis media in Saudi Arabia community found that poor knowledge of parents on otitis media resulted in poor attitude towards otitis media. The theory of reasoned action proposed that attitudes being positive or negative feeling influence the behaviour or knowledge of the parents regarding otitis media treatment and prevention.

Care-seeking Practices of Parents

Most parents (13) seek healthcare for their children with OM at the hospital. However, home management is undertaken before children are being sent to the hospital. Most of the participants sought to bring down fevers and pain with paracetamol before taking their children to the hospital. Some went to the extent of giving some antibiotics such as Amoxiclav. They have these medications from over-the-counter. This finding contradicts a study by Shaheen et al (2012) in which high education level was opined to be responsible for reporting to hospital without any intervention. In this study, though participants have higher educational level, almost half (7) made interventions before reporting at the hospital. This can be attributed to the fact that, these participants had health background. It is worth-noting that a third of participants provided no intervention before taking their children to the hospital. Yiengprugsawan, Hogan and Stazdins (2013) also buttress the fact that most parents consult general practitioners for diagnosis of OM. It was again realised from the findings that, parents who resorted to herbal treatment before reporting to the hospital were advised by their people who had no health background. This means that people in the community can affect the health-seeking behaviour of others. One revealing responds which participants did not clearly understand considering the answers they provided was best treatment for Otitis Media. Almost all participants were of the view that the best treatment for OM was early reporting at the hospital. However, according to (Ilechukwu et al., 2014) antibiotics for 5 – 7 days for uncomplicated AOM was ideal. Kaitesi, Peter, Debara (2014) argued that some parents are aware of the management of OM while others are not.

5. CONCLUSION

Parents were aware of otitis media but called it in their own local dialect with different names. Parents have information about otitis media through the health care centres. They believed that it is caused by children putting things in their ear, playing together, improper bathing of children, swimming, overcrowding, corporal punishment among others. Also, they believed that it can affect the hearing ability, communication, sleeping, appetite, academic performance as well as damaging the brain at long time. Moreover, parents believed that



otitis media can be cured. However, they believed that it should be reported early and at the health care centre rather than herbal centres or using the drug store among others. Parents identified health care services as the best way to treat otitis media. To them, otitis media can also be prevented through carefully examination of children, reporting early to the health care centres if found any signs or symptoms of otitis media, reduce overcrowding at home and in school, bathing children well, making sure children do not put things into their ears as well as taking good care of them whilst punishing them.

Recommendations

Healthcare centres in collaboration with District Health Directorate should organize frequent education to nursing parents as well as ante natal attendants on otitis media, symptoms and preventive measures. Also, the Ministry of Health in collaboration with the various District Health Directorate should educate parents more on otitis media since almost one-third of the parents were not aware of it. Moreover, parents and school management should ensure that pupils or children are free from dust and other small materials that can be inserted into their ears. Lastly, parents and teachers should take much care about children especially during their playing time with other children.

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