

Perceptions, Health-Seeking Behaviour and Traditional Treatment of Common Childhood Illnesses in Yemen: A Qualitative Study

Fauzia Faraj Bamatraf

MD, MSc, Professor of Community Health,
Department of Community Medicine College of Medicine and Health Sciences,
Hadhramout University (HUCOM),
Republic of Yemen

Correspondence:

Prof. Dr. Fauzia F Bamatraf
Department of Community Medicine, College of Medicine and Health Sciences,
Hadhramout University (HUCOM),
Al-Mukalla, Yemen
Mobile: +967 735306070

Email: drfauziabamatraf@gmail.com, ffbamatraf2008@yahoo.com

Received: August 2026. Accepted: September 2026; Published: October 2026.

Citation: Fauzia Faraj Bamatraf. Perceptions, Health-Seeking Behaviour and Traditional Treatment of Common Childhood Illnesses in Yemen: A Qualitative Study. World Family Medicine. October 2026; 24(7): 5-17 DOI: 10.5742/MEWFM.2026.241792

Abstract

Background: Although under-five mortality rates are declining globally, they remain high in developing countries, including Yemen. Deeply ingrained local perceptions and beliefs among caregivers regarding childhood illnesses are believed to influence how they diagnose and respond to these illnesses, contributing to high mortality rates.

Objectives: This study aimed to explore perceptions, health-seeking behaviours (HSB), and traditional medicine (TM) approaches for childhood illnesses in Al-Mukalla, Yemen.

Methods: A qualitative study was conducted that included three focus group discussion (FGDs) with caregivers, five semi-structured interviews (SSIs), as well as observations with traditional healers (TH). Participants were selected purposively. A total of 21 caregivers were included, each with at least one child under the age of five, who used TM or home remedies for their children during periods of illness, and who came from diverse socioeconomic backgrounds.

Results: Through FGDs and SSI, participants used the term “childhood illness” to describe any deviation from the ideal child state (“healthy child”) and considered it a normal part of child development. They also identified multiple causes for illness, combining medical and non-medical aspects. Some illnesses were categorized as “medically incurable” (such as those resulting from accidental falls, teething, or magic and the evil eye) and were believed to respond only to TM. This was the most common reason for delaying HSB. Common TM options in the study area included herbs, massage, cauterization, and Quranic healing.

Conclusion: The study underscores the need to raise awareness of caregivers in Al-Mukalla about the potential risks and complications associated with TM practices, particularly concerning the health of their children. TH are likely to play a role in treating childhood illnesses. Therefore, healthcare professionals should collaborate closely with them, given their significant influence. By providing them with accurate information, they can become agents of positive change in the community.

Keywords: Perceptions, HSB, TM, childhood illnesses, caregivers, TH, Yemen.

Introduction

Globally, under-five mortality rates (U5MR) have declined. However, child mortality rates are unacceptably high in developing countries, and the low uptake of healthcare for preventable childhood diseases is a major obstacle to increasing the use of available healthcare and reducing morbidity and mortality rates among children under five. In 2024, an estimated 4.9 million children under the age of five died worldwide (1). Approximately 75% of deaths among children under the age of five were caused by preventable and treatable diseases such as diarrhea, fever and acute respiratory infections (2,3).

Yemen is located in the southern part of the Arabian Peninsula and has a population of 39.4 million [4], making it one of the poorest countries in the Middle East [5]. In 2023, 40% of its population was under 15 years of age, and 16% was under 5 years of age [4]. Until 2013, Yemen had made steady progress in maternal and child health and in combating infectious diseases [6]. However, despite a gradual decline in the under-five mortality rate from 87 deaths per 1,000 live births in 1990 to 51 deaths per 1,000 live births in 2011, and projections of 38.1 deaths per 1,000 live births in 2024 [6,7], this rate is expected to rise again as a result of the ongoing conflict in Yemen since 2015, which has significantly exacerbated the country's chronic economic and health challenges. This has contributed to growing concerns about worsening poverty, leaving two-thirds of the population in need of humanitarian assistance [5].

The under-five mortality rate in Yemen is among the highest in the Middle East. Pneumonia was the most common cause of neonatal mortality, followed by diarrhea [8]. The health outcomes of children under five are significantly influenced by the behaviour of their healthcare providers, who are typically mothers, grandmothers, or other close family members [9]. Health seeking behavior (HSB) is defined as any action taken by individuals with health problems to obtain appropriate medical treatment for themselves or someone in their care [10].

In Yemen, caregivers' response to children under five is often delayed or inadequate. For example, national surveys show that only 35% of children seek care for conditions such as acute respiratory infections. Common obstacles include insufficient funding for treatment, distance to functioning health centers, and underestimation of the severity of illness by caregivers. Caregivers frequently delay treatment or resort to informal home remedies [11].

Delays in HSB are a contributing factor to high rates of child morbidity and mortality in developing countries, and providing appropriate medical care could prevent a significant proportion of child deaths and health problems [12]. Factors such as multiple ways to seek care and the inability to diagnose potentially life-threatening conditions have been found to be associated with these delays [13]. This delay can significantly impact a child's health, leading

to complications that reduce the effectiveness of medical care and, in some cases, render it ineffective. In his study in Al-Mukalla, Bamatraf reported that most children with persistent diarrhea were not referred for medical care until home remedies and Traditional Healers (TH) had failed [14]. During this period, the child may become severely dehydrated. Therefore, addressing the causes of these delays is crucial.

Cultural practices play a significant role in caregivers' behaviour when seeking healthcare and choosing treatment. The causes of illness are often categorized according to deeply held cultural beliefs, and healthcare decisions are consequently influenced by these beliefs. For example, while biomedical knowledge may help identify fever as a warning sign, cultural interpretations may attribute convulsions to witchcraft or the evil eye, leading caregivers to seek TH before resorting to formal healthcare facilities [15-17]. In developing countries, including Yemen, cultural and traditional practices for treating illnesses are widespread, with most caregivers preferring traditional remedies over modern healthcare services for treating their children's illnesses, largely due to their local availability [11,16,18, 19].

The World Health Organization (WHO) estimates that at least 80% of the population in most developing countries relies on traditional forms of primary healthcare [20]. Traditional Medicine (TM) continues to play a significant role in child healthcare in many Arab and developing countries [16,21-23]. In a study conducted by Bamatraf (2008) in Al-Mukalla, Yemen, it was observed that the majority of caregivers were more confident in home remedies they used themselves or in traditional healers to treat their children's diarrhea, due to a lack of trust in the services provided at health centers. They sought different treatment options before consulting any healthcare facility, leading to unnecessary delays in obtaining at least one consultation before hospital admission [14]. Ngere et al. [23] found an increasing demand for TM in western Kenya, where caregivers often prefer traditional methods for treating certain childhood illnesses. This study highlighted the need to improve safety and quality standards for traditional medicine products.

In general, there are published studies on caregiver behaviour patterns during childhood illness and the factors influencing health service utilization, particularly in developing countries. However, most of these studies are quantitative and often describe behaviour patterns without elucidating their causes and influencing factors, especially cultural practices and beliefs, which are widespread in developing countries [19,20,23]. In Yemen, cultural practices are widespread, with many believing that traditional medicine is always beneficial and never harmful [14,24]. Very few qualitative studies have been published, or are unavailable, on the factors influencing unhealthy caregiver behaviours in Yemen. A recent survey in Yemen revealed that 35% of children under five years old with respiratory symptoms and 53% with diarrhea did not receive medical care [11]. Therefore, this qualitative study aims to identify the perceptions, beliefs (regarding

study aims to identify the perceptions, beliefs (regarding the causes and severity of illness) and healthcare-seeking behaviours of caregivers when their children become ill. It also aims to identify the traditional treatment methods used by caregivers and traditional healers for these illnesses in Al-Mukalla, Yemen. Ultimately, this will lead to a better understanding of how to design effective policies to improve health behaviour and child health.

Methods and Materials

Study setting:

The study was carried out in Al-Mukalla, Hadhramout governorate, Yemen. It is located on the Hadhramout coast of the Arabian Sea in the South of Yemen. According to the last Complete Census Conducted in 2004, Al-Mukalla has about 196,187 inhabitants. Ongoing conflict has prevented a nationwide census in the last two decades [25]. In Al-Mukalla, health services are provided by the public sector, the private sector, and traditional healers. The public sector remains the primary provider of health care at all service levels [26].

Study participants and sampling procedures:

A qualitative study was conducted between January and May 2025, involving caregivers of children under five years of age. Purposive sampling method was used to select participants based on predefined inclusion criteria, including age, marital status, responsibility for the care of at least one child under five, and residence in Al-Mukalla. Caregivers were selected from diverse socioeconomic backgrounds and with prior experience using TM with their children, in order to encompass a wide range of perspectives on childhood illnesses and HSB. To enhance contextual understanding, five traditional healers (TH) were included in the study: two herbalists, a religious healer, a massager, and a cauterization healer. Their practices were observed. They were purposely selected based on their roles and involvement in the management of childhood illnesses.

Three focus group discussions (FGDs) were conducted with caregivers, each consisting of seven participants. Each FGD lasted between 60 and 90 minutes. The FGDs explored caregivers' perceptions, their initial reactions, HSB and treatment of childhood illnesses. The discussions were facilitated by the researcher and a trained assistant, with the assistant acting as facilitator while the researcher took notes. Responses were manually recorded after each session before proceeding to the next. In addition, five Semi- Structured Interviews (SSIs) were conducted with TH in their workplaces, either at home or in their shops. Each interview lasted approximately 45 minutes, allowing ample time for participants to discuss their perceptions and treatment experiences for common childhood illnesses in detail. Some of their treatment practices were also observed, to document their actual practices when bringing children in for treatment. Photographs were taken.

Data analysis

All SSIs and FGDs were audio-recorded with the participants' consent and transcribed verbatim. Content analysis was used to interpret the results and extract themes from the data. According to content analysis and the continuous comparison technique Pobe et al [27], the text was read repeatedly to familiarize participants with the content, then categorized into words and phrases to find meaningful relationships between emerging categories and themes. The described categories and themes were extracted inductively, that is, gradually and with the help of continuous re-reading and analysis.

Ethical approval

Ethical approval was obtained from the College of Medicine and Health Sciences, Hadhramout University (HUCOM). FGDs, SSIs and observation only commenced after obtaining informed consent and explaining the study objectives to the participants. The privacy and confidentiality of participant data were ensured. To maintain the confidentiality of the participants' identities and prevent their disclosure, the participants' identities were hidden (using numbers) in all documents, with these numbers being used throughout the study period.

Results

Thematic analysis of the data from FGDs, SSIs and observation were carried out. The results were presented within five interrelated themes: (1) participants' perceptions of the causes of childhood illness, (2) symptom severity and initial caregiver responses to illness, (3) caregiver decision-making processes (HSB), (4) treatment of childhood illness by caregivers and TH, and (5) observations on treatment practices by TH.

Theme 1 Participants' perceptions of causation:

In this study, participants in FGDs and SSIs used the term "childhood illness" to describe any deviation from the ideal child state ("healthy child"), but they did not consider it a serious illness, such as diarrhea, cough, fever, and vomiting, which are considered part of a child's development.

"These illnesses themselves don't kill" One grandmother said:

Most of the participants agreed with this sentiment.

Regarding the causes of childhood illnesses, participants in FGDs and SSIs cited numerous reasons and offered diverse explanations, combining both medical and cultural perspectives. They linked these illnesses to child development. One mother in a FGD said:

"This happens when the child starts teething, or when they start crawling or walking. It's not an illness; it's normal. It lasts for a few days and doesn't require any medical treatment."

Caregivers in FGDs also mentioned poor hygiene (a dirty bottle or hands, or improperly handling contaminated food). One caregiver said:

"If the child plays in dirty places and eats without washing their hands, they will get sick."

In addition, caregivers and healers attributed childhood illnesses, such as persistent diarrhea and vomiting in infants, as well as poor appetite, fever, and/or persistent cough, to accidental falls (Ragabah) when a child falls or is handled improperly. Caregivers believe that in this case the child does not need medical care but should be taken directly to a massage healer. One caregiver in FGD said,

"These illnesses are usually treated with traditional therapy (massage); medical treatment is not necessary".

A mother in another FGD said:

"My daughter fell once. We took her immediately to a clinic, but her condition did not improve for several days. I called my grandmother to give her a neck massage, and she started to get better that same day!"

Furthermore, most participants linked diarrhea and colic to unsuitable breast milk for their baby. One mother in FGD said,

"Because my milk isn't suitable, to prevent my babies from getting these illnesses, I started feeding them formula from birth, and it's beneficial."

Participants have linked worm infections to eating large amounts of sweets, while they have linked a child's high fever, difficulty breathing, or flu symptoms to exposure to cold weather or cold air. One mother in FGDs said,

"I think my baby gets sick most of the time because of the weather. When he's cold, he's more likely to get fever, difficulty of breathing or the flu."

Furthermore, the caregivers and healers attributed the illness to spiritual or supernatural causes (such as envy). Envy, they believed, occurs when people look at a child with malicious intent or when they wished that someone didn't possess what others had. Some caregivers disagreed with these views.

As one young caregiver put it, *"It doesn't make sense. We don't believe that anymore."*

In addition, they believed these illnesses were God's will. One grandmother said:

"It is God's will if a child has some of these illnesses."

All the caregivers agreed with this view.

Theme 2: Symptom severity and initial responses to childhood illness:

The recognition of a symptom is a critical factor that influences timely HSB among caregivers. In most childhood illnesses, the mother is the first to notice symptoms in her child. She then begins consulting her social support network, which usually includes older family members (grandmothers or mothers-in-law), and sometimes friends or neighbours with children, seeking advice on the nature of the illness and its treatment.

It was observed in the FGDs that out-of-home care and treatment were not sought immediately or within 24 hours of the child becoming ill. For most caregivers, the decision to seek out-of-home care often stemmed from a feeling that self-treatment was ineffective in alleviating the child's symptoms and that, in most cases, the child's condition was worsening. One mother in FGDs said:

"I suspected my five-year-old daughter was ill when she stayed home and her condition worsened; she developed a high fever, and I asked my mother-in-law for help in diagnosing it. We agreed it was a flu-like illness and that we would treat it with home remedies. Her fever suddenly spiked, and she began having difficulty breathing. That's when we realized it was a respiratory illness, and we needed to take her to the hospital."

As for the remaining caregivers, most explicitly stated their desire to seek out-of-home care immediately, especially when they felt the child's condition was serious.

One caregiver in FGDs said,

"There are no home remedies for high fever or difficulty breathing. If a mother keeps her sick child at home, they will die." All mothers should know this and act immediately.

Theme 3: Decision-making in healthcare seeking:

In this study, caregivers reported using multiple strategies and treatment options when their children were ill. Typically, caregivers begin treating the sick child at home with whatever is available to manage the illness. Home fever control, as reported in all FGDs, included applying cool compresses to the child's head and extremities, administering fever reducers such as paracetamol, and, in some cases, massaging the child with herbal oils. They also mentioned drinking honey, with or without herbs, or with black seed, as a treatment and preventative measure for childhood illnesses.

One caregiver in FGDs said:

"Yes, honey is beneficial for newborns, children, and adults. I have given my children honey since birth to maintain their health, and also as a treatment for diarrhea and other illnesses."

Rice water, herbal tea, and yoghurt were also mentioned as treatments for diarrhea. When diarrhea is accompanied by vomiting, some grandmothers massage the child's neck and/or abdomen, and sometimes they stop breastfeeding and restrict certain foods during the episode of diarrhea. In cases of worms, vinegar is given to the child to drink because it kills the worms.

One grandmother in FGDs said: *"Yes, drinking vinegar with a little herb cleanses the stomach of parasites."*

Participants also mentioned the use of over-the-counter medications (such as antibiotics, anti-diarrheal, and anti-emetics), leftover medications from previous treatments, and sometimes sharing medications among family members, as common practice. One caregiver said,

"Sometimes we give the child antibiotics early, as soon as they show symptoms."

Some participants in the FGDs nodded in agreement. Another caregiver added,

"I do the same thing with my children. If I go to the doctor, they'll prescribe the same medication."

When we asked the caregivers, “What medications do you give your sick children?” they couldn’t specify. However, a young caregiver explained,

“My husband usually buys it, and we always have it at home.”

Another caregiver in the same FGDs provided further clarification:

“I don’t remember the exact name, but it’s a pink liquid, and you can buy it at the pharmacy.”

The caregivers mentioned that, they sometimes use both types of services consecutively without waiting for results. As one mother explained,

“When my child is sick and I’m scared, I use whatever seems to work. When I have the money, I go to the hospital, and in the meantime, I use whatever my mother-in-law gives me.”

If the cause is believed to be envy or an accidental fall, they go directly to a traditional healer. One grandmother said, *“Some childhood illnesses don’t require a visit to a doctor or hospital.”*

Only a few caregivers mentioned using oral rehydration solution (ORS) to treat diarrhea at home. Help outside home would be sought only when the child did not get better, as one grandmother reported:

“We just start use traditional home remedies. If all fail, then we take the child to the health institution”.

Most of participants in other FGDs agreed with these sentiments. Home remedies were described as inexpensive and convenient by all participants in all FGDs

Theme 5: Treatment of Childhood illness practiced by traditional healers:

Herbalists provide treatments to residents of Al-Mukalla and the surrounding areas. Their clients include men, women, and their children from diverse socioeconomic backgrounds and age groups. Most seek consultations for themselves and their children suffering from various childhood illnesses. They receive patients in their homes or shops. The healers first listen to a brief explanation from the patient, then diagnose their condition based on questions and answers, and finally prescribe the appropriate herb or compound. Several plants have been mentioned as being used to treat childhood ailments. The healers prepare a powder from each plant, sometimes combining several herbs, and give it to the sick child. The recommended dose for infants is a pinch or half a teaspoon of this powder mixed with milk, boiled water, or honey, twice a day for up to three days. The dose and duration of treatment can be increased for older children. It is worth noting that these herbs were widely used for both adults and children, with variations in dosage or sometimes mixed with oil for external use. As one herbalist explained, *“Internal and external application are essential for a complete cure.”* They also reported that in rare cases, if symptoms persist or complications arise, special herbal formulations are recommended to treat the illness. Healers believe these herbs improve the child’s blood, address the root cause of the illness, and strengthen the body.

As for the spiritual or religious healer (*Alsheikh*), he treats childhood illnesses believed to be caused by envy or the evil eye through spiritual healing, reciting prayers and selected verses from the Quran. The Alsheikh writes these verses on a piece of paper placed under the child’s pillow or recites them over water or oil. The child then drinks the water over which the Quran has been recited, while the oil is applied to their body. Sometimes, in addition to the Quran, he advises consuming herbs or burning incense. Each session lasts ten minutes and continues for three days or more.

Theme 5: The observations:

The observation was conducted with two healers, a massager and a cauterization healer. They were purposely chosen as their methods (neck and/or abdominal massage and cauterization) are the commonest traditional practices available.

1. Cauterization (A harmful practice):

The healer is a woman in her sixties who has been practicing cauterization as a treatment for various symptoms and illnesses, exclusively for women and children, for over twenty years, having learned it from her mother. Her clients come from diverse socioeconomic backgrounds, including educated caregivers. This potentially harsh procedure is performed by healers, sometimes grandmothers, in the home. Most often, cauterization is done using a very hot iron rod, 10 to 30 mm in diameter, which is pressed firmly against the skin for 20 to 30 seconds until it turns white. The child's chest, abdomen and head were the most commonly used areas for cauterization. (Images 1,2) Thermal cauterization is used to treat chronic and intractable conditions, such as chronic or persistent diarrhea, flatulence, prolonged cough, persistent vomiting and excessive crying, and high fever accompanied by convulsions. It is even used to treat other ailments in children and adults, such as bone problems, polio, chronic wound cancers etc....



Image 1: Multiple cautery marks over a child's abdomen



Image 2: Multiple cauterization marks around a baby's navel

2. Massage treatment:

The healer was a 65-year-old woman with a primary education who had been practicing massage for 35 years. She inherited her massage therapy skills from her mother and grandmother, both of whom are deceased. Her clients were women and children brought in by caregivers. She saw her patients on the floor of a small, somewhat unclean room in her home. She described herself as a specialist in digestive and respiratory problems. She treated children of various ages, often suffering from symptoms resulting from accidental falls, such as diarrhea, vomiting, fever, persistent cough, loss of appetite, and general weakness. On the patient's first visit, the therapist would ask the caregiver some questions about the patient's medical history and whether they had experienced any accidental falls. The therapist observed the patient, focusing on their eyes, head, and limbs. She then massaged the child's neck with oil, moved their head up and down, and massaged their abdomen (Images 3, 4).

The massage session lasted about ten minutes, and the child cried and vomited at the end of the session. Caregivers typically recommended three to five more sessions of treatment. The treatment involved a massage with olive oil; the therapist used her bare hands and warm oil. The healer believes that massage opens the nerves and blood vessels in the neck and abdomen, improving blood flow to the stomach. Treatment typically lasts three to five sessions.



Image 3: A neck massage session for a 6-month-old child



Image 4: Abdominal massage session for a 7-month-old

In some cases, if symptoms persist, the healer recommends cupping without bloodletting. She asserts that cupping is the most effective and recommends continuing it for five days or more. The treatment tool is a dry cup. To perform the procedure, she first selects an area between the shoulder blades (4 cm below the last cervical vertebra), then places the dry cup on the area and begins suction for one minute. She repeats the suction two or three times in each session (Image 5).



Image 5: Cupping without bloodletting session for a 3-year-old girl

During the waiting period, the researcher conducted brief interviews with some of the caregivers about the reason for their visit and whether they had sought medical help before resorting to the healer. Most of the caregivers had tried home remedies without success, while some went directly to the TH, believing she was the only one who could help. However, none of them had sought medical help, and all were satisfied with the treatment results. According to participants in FGDs, this acceptance stems from the fact that:

“massage therapy is comfortable, practical, economical, and painless, and it does not cause any side effects in treating childhood diarrhea or other symptoms, so we are more willing to treat our children with it.”

Discussion

Our results indicate that the decline in access to health facilities for treatment is not due to a lack of awareness of it or even a lack of perceived need for this health option, but is related to social and cultural factors, such as how caregivers understand and perceive the child's illness, and how they deal with it within families and communities. The study shows that the participants presented a wide range of local perceptions and explanations, combining medical and cultural perspectives on childhood illnesses. These local concepts of illness and its causes significantly influenced the type of treatment used, whether caregivers would first resort to TM, use home remedies, or go directly to medical facilities. These explanations included natural and environmental factors, a normal stage of child development, poor hygiene, accidental falls, the evil eye, and God's will. These responses demonstrate the coexistence of medical knowledge and traditional beliefs about the concept and causes of illness. The ranges of perceptions of childhood illnesses among caregivers in FGDs largely matched those reported by TH in SSIs. There are also points of similarity with perceptions in the previous study conducted by the author (Bamatraf) in 2008, which reported that caregivers considered diarrhea a normal consequence of teething, expected with each tooth erupting, and not viewed as a serious illness requiring attention [14]. These findings are also consistent with other studies [28-30]. It is crucial that caregivers understand the meaning of the causes of childhood illness; only then can they make informed decisions and seek medical help. Numerous qualitative studies have emphasized the importance of considering cultural factors, such as local beliefs about the causes and classification of illnesses, because of their profound effects on the effectiveness and design of health promotion programs. [22,31,32]

The current study showed that the perceived severity of the illness was also one of the most common reasons for avoiding or delaying seeking medical care among caregivers. Although caregivers listed various causes of illness, some of which they considered not requiring medical attention, they associated high fever and difficulty breathing with severe illness requiring immediate medical

care. This aligns with the biomedical understanding of warning signs in conditions such as malaria or pneumonia [33]. In many resource-limited settings, delays in recognizing warning signs, such as fever, seizures, and difficulty breathing, lead to increased morbidity and mortality rates among children [33]. Identifying symptoms is often considered a major challenge in many studies addressing healthcare seeking for childhood illnesses [34]. Mothers and caregivers are often the first to notice symptoms of illness in their children. A lack of awareness of symptoms and warning signs by caregivers can lead to delays or failures in seeking treatment. These decisions are rarely simple; rather, they are intertwined within a complex web of cultural, religious, social, and economic perceptions and beliefs [35]. These findings are consistent with other studies showing that caregivers often adopt a pluralistic understanding of illness, combining natural and non-natural explanations. A caregiver's ability to differentiate between mild and severe illness often influences their decision regarding symptom management at home, seeking advice from TH, or resorting to modern medical healthcare facilities [14,29,36].

Despite the fact that the caregivers in the current study who participated in the focus group discussions had university degrees, secondary and primary qualifications, and belonged to diverse age groups, they all expressed a preference for TM, demonstrating the continued prevalence of traditional healing practices among individuals from diverse backgrounds. Our study showed that healthcare decision-making is influenced by a complex interplay of perceived causes, symptom severity, and cultural beliefs. Belief in TM was prevalent, even among those who primarily preferred modern medical facilities [36]. It is particularly important to note that caregivers identified multiple medical and non-medical causes for childhood illnesses. They demonstrated a high degree of similarity in their localized perceptions of the causes of these illnesses, and consequently, most sought care from multiple providers and pursued multiple treatment approaches simultaneously to achieve tangible benefit. TH were often perceived as more convenient, accessible, and less expensive. On the other hand, the severity of the illness was a strong motivator for seeking medical care, as the modern medical system was seen as a safe haven should the child's condition deteriorate. This was also a common finding in previous studies [16,19,22]. This classification of diseases shows that local beliefs about their causes and severity may hinder or delay the seeking of medical care. In a study conducted among caregivers in Al-Mukalla, Bamatraf found that many of the barriers to seeking care among children with diarrhea were related to local perceptions of the illness. Consequently, most children with persistent diarrhea were referred to medical care only after home remedies and traditional healers' treatments had failed. During this period, the child may become severely dehydrated [14]. These results are consistent with other studies that have shown the prevalence of medical pluralism and widespread belief in traditional remedies in many developing countries [16,22,36]. Furthermore,

our study identified several factors influencing HSB for childhood illnesses in both modern and traditional medical facilities. Belief in TM was prevalent, even among those who primarily preferred modern medical facilities. Consequently, TH were perceived as more suitable for treating these illnesses. The ranges of caregivers' perceptions of childhood illnesses in this study largely aligned with those reported by TH.

It is to be noted that the belief among caregivers that an illness does not require medical treatment was the most common reason for avoiding or delaying seeking medical care. It also became clear that when childhood illnesses are classified according to local beliefs as "uncurable by medicine" (such as those resulting from accidental falls, teething, magic, the evil eye, or fate), traditional healers are often seen as more appropriate, more accessible, and less expensive for these ailments.

As one caregiver stated,
"These illnesses are usually treated with traditional medicine; medical treatment is unnecessary."

This has significantly influenced HSB (ranging from home remedies and the use of over-the-counter medications to reliance on traditional healers). There is a widespread belief in Yemen and in many Arab and other developing countries that some diseases can only be "cured" or best prevented through TM, which contributes to delays in seeking healthcare services, diagnosis, and treatment [16,31,32,37,38].

Traditional medicine (TM) plays a crucial role in primary healthcare in many developing countries, and its use has increased in recent years. However, some elements of TM are beneficial, while others may not be. According to the WHO, more than 80% of the global population across over 170 countries uses traditional, complementary, and integrative medicine. People turn to these practices as a primary or secondary health resource [20].

The prevalence of TM use among caregivers and TH in treating childhood illnesses in Al-Mukalla was assessed, revealing that herbs was the most commonly used TM in the area. This finding aligns with the cultural and historical significance of herbal remedies and massage in traditional healing practices. However, despite the presence of herbal medicines in many countries, a relatively small number of plant species have been studied to determine their potential medical applications. Caregivers should be aware that the vast majority of herbal medicines have not undergone the same rigorous laboratory testing for safety and efficacy as Western medicines, nor have they been subject to the same level of government regulation.

Other common TM included oil ointments, honey, cupping, and Quranic healing. These results support the notion that traditional healing practices in the Al-Mukalla region encompass a wide range of approaches, reflecting a holistic approach to healthcare. TH and caregivers have long considered honey an important part

of traditional and religious treatments, both preventative and curative. Honey has been used for centuries as a natural remedy, and modern science confirms its powerful antimicrobial properties. It is effective against pathogens such as *Staphylococcus aureus* and *Candida albicans* [39]. Honey has also proven highly beneficial in treating infected surgical wounds [40].

Another TM was abdominal and neck massage, which was a common treatment for childhood symptoms (caused by accidental falls) and was practiced by TH and grandmothers in the study area. This treatment has been widely accepted by caregivers as a satisfactory remedy for their children. Professor Zhang from China noted this promising outcome of abdominal massage therapy. He reported that infants treated with traditional abdominal massage or by using ECIWO (Embryo Containing the Information of the Whole Organism) massage got faster recovery from diarrhoea, than those who were treated with Western drugs (antibiotics) [41]. Massage therapy has also been mentioned as a treatment for diarrhea in children in other previous studies [21,42].

Other common traditional remedies for childhood ailments, as reported by caregivers, include cupping and cauterization. Traditional Arab cauterization was known and practiced before the advent of Islam. The Prophet Muhammad (peace be upon him) did not favor cauterization, saying, "Healing is in three things: cupping, honey, and cauterization, but I forbid cauterization." In another narration, the Prophet (peace be upon him) said, "If there is healing in your medicine, it is in cupping, honey, or cauterization, but I do not like to be cauterized with fire" [43].

Cauterization was a common practice in Yemen and was mentioned in the National Survey as a treatment for umbilical cord injuries in newborns of Yemeni mothers [44]. It was also commonly used in many other Arab and Muslim countries, including, Saudi Arabia, Sudan, Oman, Libya, and Iran and, to treat various illnesses in children and adults [21,45-48]. Cauterization was also a common treatment in ancient Greek, Indian, and Chinese healing practices [49]. This aggressive procedure may have adverse consequences in infants and young children. Infection at the site of this procedure and death from sepsis may occur. Such practices should be depreciated.

Conclusion

The findings of this study confirm the persistence of traditional beliefs and practices in Al-Mukalla and their direct influence on how caregivers manage their children's illnesses. Misconceptions among caregivers regarding the causes of common childhood illnesses were reflected in case management and healthcare practices. In most cases, caregivers clearly placed more trust in home remedies or traditional healers than in the services offered at health centers. This tendency contributed to delays and limited use of healthcare services. Understanding

local beliefs is crucial for health development planning, and caregivers in Al-Mukalla should be educated about the potential risks and complications associated with traditional medicine practices, particularly concerning their children's health. TH are likely to play a role in the treatment of childhood illnesses, so healthcare professionals should collaborate closely with them given their significant influence. By providing them with accurate information, they can become agents of positive change in the community.

Acknowledgements

The author would like to express his sincere gratitude to all the caregivers and traditional healers who participated in the study for their generous cooperation.

References

- World Health Organization. Child mortality (under 5 children) 2025. Available at: <https://www.who.int/news-room/fact-sheets/detail/child-mortality-under-5-years> [Accessed May 2025]
- World Health Organization. World health statistics 2016: monitoring health for the SDGs sustainable development goals: WHO, 2016.
- World Health Organization. Levels and trends in child mortality. 2018.
- United Nations Department of Economic and Social Affairs Population Division. World Population Prospects 2024, Online Edition. 2024. Available at: <https://population.un.org/wpp/Download/Standard/Population>. [Accessed May 2025]
- World Bank Group. The World Bank in Yemen. <https://www.worldbank.org/en/country/yemen/overview>. 2024. Accessed 2024 July 16
- World Health Organization. Child and adolescent health, Yemen. 2024. <https://www.emro.who.int/child-adolescent-health/data-statistics/yemen.html>. Accessed July/ 2025
- UNICEF Data 2026: Monitoring the situation of children and women in Yemen Available at: <https://data.unicef.org/country/yem/>. Accessed February 2026
- Qirbi N, Ismail SA. Health system functionality in a low-income country in the midst of conflict: the case of Yemen. *Health Policy Plan*. 2017;32 (6): pp 911–22.
- UNICEF. Under-five Mortality 2025. Available at <https://data.unicef.org/topic/child-survival/under-five-mortality/>
- Olenja J. Editorial Health seeking behaviour in context. *East Afr Med J*. 2003;80 (2):61–62
- Central Statistical Organization (CSO) and United Nations Children's Fund (UNICEF). Yemen multiple Indicator Cluster Survey 2022–2023, Survey findings Report. Yemen: Central Statistical Organization and United Nations Children's Fund; 2023. <https://mics.unicef.org/news/just-releasedmics-yemen-survey-findings-report-and-snapshots>. Published 2023, [Accessed March/ 2025].
- Mpimbaza A, Nayiga S, Ndeezi G, et al.: Understanding the context of delays in seeking appropriate care for children with symptoms of severe malaria in Uganda. *PLoS One*. 2019; 14 (6): pp 62 - 72.
- Kolola T, Gezahegn T, Addisie M: Health care seeking behavior for common childhood illnesses in Jeldu District, Oromia Regional State, Ethiopia. *PLoS One*. 2016; 11 (10):2-8
- Bamatraf FF. Determinants, health care seeking behavior and treatment of persistent diarrhoea among children under five years of age in Al-Mukalla District. PhD thesis. University Kebangsaan Malaysia; 2008. (Unpublished data.)
- Muhanga M, Malungo JR. Does Attitude Associate, Correlate, or Cause Behaviour? An Assessment of Attitude towards Health Behaviour under One Health Approach in Morogoro, Tanzania. *Int J Adv Res Publications (IJARP)*. 2017;3(1); pp 82–91.
- Ngere S, Akelo V, Ondeng'e K, Ridzon R, Otieno P, Nyanjom M, Omoro R, Barr T, B. Traditional Medicine Beliefs and Practices among Caregivers of Children under Five Years—The Child Health and Mortality Prevention Surveillance (CHAMPS), Western Kenya: A qualitative study. *PLoS ONE*. 2022;17(11): e0276735. <https://doi.org/10.1371/journal.pone.0276735>.
- Mburu CM, Bukachi SA, Shilabukha K, et al.: Determinants of treatment-seeking behavior during self-reported febrile illness episodes using the socio-ecological model in Kilombero District, Tanzania. *BMC Public Health*. 2021; 21(1): pp1075-84
- Ajibade B, Amoo P, Adeleke M, Oyadiran G, Kolade O, & Olagunju R. Determinants of mothers health seeking behavior for their children in a Nigerian teaching hospital. *IOSR J Nurs Health Sci*; 2013, 1(6); pp 09–16
- Sultana M, Sarker AR, Sheikh N, Akram R, Ali N, Mahumud RA, Alam NH. Prevalence, determinants and health care-seeking behavior of childhood acute respiratory tract infections in Bangladesh. *PLoS One*. 2019. <https://doi.org/10.1371/journal.pone.0210433>.
- WHO. Integrating Traditional Medicine in Health Care. 2023. Available at: <https://www.who.int/southeastasia/news/feature-stories/detail/integrating-traditional-medicine>. [Accessed 12/2025]
- AlqahtaniYA, Shati AA, Alalyani RT, Alolah TA, Alshahrani MA, Asiri GB et al. Awareness and Attitude of Parents and Caregivers Regarding Harmful Traditional Medical Practices Towards Children in Aseer Region of Saudi Arabia. *International Journal of General Medicine* 2023;16; pp 4515–4524
- Al-Yateem N, Lajam AMA, Othman MMG, Ahmed MAA, Ibrahim S, Halimi A, Ahmad FR et al. The impact of cultural healthcare practices on Children's health in the United Arab Emirates: a qualitative study of traditional remedies and implications. *Front. Public Health*; 2023;11:1266742. doi: 10.3389/fpubh.2023.1266742
- Osarfo J, Ampofo GD and Tagbor HK. Health seeking behaviour of caregivers of children under five and its determinants in Ho West and Adaklu districts, Volta Region, Ghana: a community-based cross-sectional study. *BMC Public Health*; 2025 25:1219-26

24. Webair HH, & Bin-Gouth AS. Factors affecting health seeking behavior for common childhood illnesses in Yemen. *Patient Preference and Adherence*:2013; 7, pp 1129–38. <https://doi.org/10.2147/PPA.S51124>
25. Yemen Census. 2004. Central System Statistical in Hadhramout governorate, Republic of Yemen. December 2004
26. United States Agency for International Development (USAID). 2006. Yemen National Health Accounts: Estimate for 2003. Bethesda, MD: ABT Associates Incorporation.
27. Pope C., Ziebland S. & Mayas N. 2000. Qualitative research in health care: Analyzing qualitative data. *British Medical Journal* 320 (7272): pp114-116
28. Orora CN ,Obiri JF and Ombachi NK. Health Seeking Behaviour Determinants among Caregivers of Children Facing Diarrhoea in Homabay County, Kenya. *International Journal of Social Science and Humanities Research*. 2017; 5:3, pp 223-236
29. Msambal iIM, Myumbo L and Masanja P. Perceptions of illness and health-seeking behaviour among caregivers of under-five children in Morogoro municipality, Tanzania: a qualitative study *Discover Health Systems*. 2026; 5:50; pp 2-15
30. Ahorlu CK, Koram KA, Ahorlu C, De Savigny D, Weiss MG. Socio-cultural determinants of treatment delay for childhood malaria in southern Ghana. *Tropical Med Int Health*. 2006;11(7): pp1022–31.
31. Shaw B, Amouzou A, MillerNP, Bryce J and Surkan PJ. A qualitative exploration of care-seeking pathways for sick children in the rural Oromia region of Ethiopia. *BMC Health Services Research*. 2017; 17:184. DOI 10.1186/s12913-017-2123-5
32. Colvin CJ, Smith HJ, Swartz A, Ahs JW, De Heer J, Opiyo N, Kim JC, Marraccini T, George A. Understanding care seeking for child illness in sub-Saharan Africa: a systematic review and conceptual framework based on qualitative research of household recognition and response to child diarrhoea, pneumonia and malaria. *Soc Sci Med*. 2013;86: pp 66–78.
33. World Health Organization. 2024. Gender and health. Available at: https://www.who.int/he alth-topics /gender# tab=tab_1 [Accessed March/2026]
34. Riegel B, De Maria M, Barbaranelli C, Matarese M, Ausili D, Stromberg A, Jaarsma T. Symptom recognition as a mediator in the self-care of chronic illness. *Frontiers in public health*, 2022; 10, <https://doi.org/10.3389/fpubh>.
35. Merera AM. Determinants of acute respiratory infection among under-five children in rural Ethiopia. *BMC Infect Dis*. 2021. <https://doi.org/10.1186/s12879-021-06864-4>
36. Hooft A, Nabukalu D, Amumpaire JM, Gardiner MA, and Sundararajan R. Factors Motivating Traditional Healer versus Biomedical Facility Use for Treatment of Pediatric Febrile Illness: Results from a Qualitative Study in Southwestern Uganda. *Am. J. Trop. Med. Hyg*; 2020;103(1); pp 501–507
37. Tawfiq E, ID, Khwaja MIS, Alawi SAS, Jammalluddin J, Syed Nasir H. Predictors of Mothers' Care Seeking Behavior for Common Childhood Illnesses: Findings From the Afghanistan Health Survey 2015. *Int J Health Policy Manag* 2023;12, pp 7598-7609.
38. Simieneh MM, Mengistu MY, Gelagay AA, Gebeyehu MT. Mothers' health care seeking behavior and associated factors for common childhood illnesses, Northwest Ethiopia: community based cross-sectional study. *BMC Health Serv Res*. 2019;19(1):59. doi:10.1186/s12913-019-3897-4
39. Rana SH , Sawsan M A , Wjdan SQ , Ali MS. Antibacterial Effect of Natural Honey of known active components by GC-MS technique against *Staphylococcus aureus*. *Journal of Bioscience and Applied Research*, 2025,11: 2, pp 533-548.
40. Mohamed AEM. Benefits of using honey in the management of postoperative wound. *The Egyptian Journal of Hospital Medicine*. 2025;101, pp 5610-15.
41. Zhang X. 1996. Traditional medicine and WHO. *World Health 49th Year 2*.]
42. Abdul-Wahab, M.M. 1987. Traditional practices as a cause of morbidity and mortality in Juba area Sudan. *Annals of Tropical Pediatrics* 1: pp 18-21.
43. Deuraseh N. Health and medicine in the Islamic tradition based on the book of medicine (Kitab Al-Tibb) of Sahih Al-Bukhari. *JISHIM*. 2006; 5:2-14.
44. Yemen YDMCHS. 1997. Yemen Demographic and Maternal and Child Health Survey. Central Statistical Organization (CSO), Yemen and Macro International Incorporation. Calverton, Maryland: United States America. November 1998
45. Satti Abdelrahim, Mohamed-Omer SF, Hajabubker MA. Pattern and determinants of use of traditional treatments in children attending Gaafar Ibnauf Children's Hospital, Sudan. *Sudanese journal of paediatrics*. 2016;16(2): pp 45-50
46. Ghazanfar SA. Wasm: a traditional method of healing by cauterization. *Journal of ethno pharmacology*. 1995 Jul 28;47(3):pp 125-8.
47. Farid MK, El-Mansoury A. Kaiy (traditional cauterization) in Benghazi, Libya: complications versus effectiveness. *Pan African Medical Journal*. 2015; 22:98 doi:10.11604/pamj.2015.22.98.6399.
48. Asefzadeh, S., & Sameefar, F. 2001. Traditional healers in the Qazvin region of the Islamic Republic of Iran, a qualitative study. *Eastern Mediterranean Health Journal*, 7 (3), pp 544- 551.
49. Mohd Nayab, History of Amal-i-Kaiyy (Cauterization) and its indications according to the shapes of instruments: A review. *International Journal of Medical and Health Research*. 2017;3(3): pp 60-61.