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Original Article

Mothers' Performance Regarding Homecare Management of Upper Respiratory Tract Infection among Under 5 Years Children

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ABSTRACT

Background and objectives: Upper respiratory tract infections are regarded as the most predominant and significant health concern and reason for pediatric visits to the emergency department and outpatient clinics. Upper respiratory tract infections are responsible for epidemics that facilitate the transmission of disease. The present study aimed to assess the mother's performance regarding home care management of upper respiratory tract infections in children under five years of age.

Methods: A descriptive study was conducted at Raparin Teaching Hospital for Children in Erbil City, Kurdistan Region/Iraq. A non-probability convenience sampling technique of 213 mothers was chosen who were admitted to the hospital with their patient child. A questionnaire format developed by the researchers for data collection included three parts: socio-demographic characteristics of the mother, biographic information of the child, and the mothers' performance regarding home care management of upper respiratory tract infection. Mothers with their children who were infected with upper respiratory tract infections and who were willing to participate in the study were included. Children with other complications such as Down syndrome, cerebral palsy, and other infections were excluded. The data was processed and analyzed using Statistical Package for the Social Sciences, version 27.

Results: The study found that most of the mothers aged between 25-38 years were married, lived in urban areas, around half had middle socioeconomic status, almost all mothers were housewives, and around half of the children were toddlers and were bottle-fed. The study found a significant association between mothers' educational level and occupation with their performance, and there was a significant association between the age of the child, type of feeding, and body mass index with mothers' performance.

Conclusion: The study concluded that mothers' performance was significantly linked to their age, education, job, and their child's age and body mass index.

Keywords: Child; Mothers; Educational Status; Home Care Services.

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INTRODUCTION

Upper respiratory tract infections (URTIs) represent a significant human health concern due to their highprevalence and associated economic burdens. This diagnosis is prevalent in primary care globally, with 17.2 billion cases reported annually, and preschool children average 6-10 occurrences during the same timeframe [1]. The World Health Organization reports that 6% of all diseases worldwide are respiratory infections. Each year, approximately 6.6 million children under the age of five die, and around 95% of these deaths occur in low- and middle-income countries. [2]. The admissions for upper and lower respiratory tract infections, respiratory syncytial virus (RSV), and influenza peaked at the beginning of each year from 2017 to 2020 for children 0–5 years old. The most prevalent form of RTI admission among those included was URTI, accounting for 217 admissions each month on average. [3]. URTIs are characterized by self-limiting inflammation and edema of the upper airways, accompanied by cough and the absence of pneumonia symptoms [4]. URTIs occur regularly with a modest progression and minimal complications; however, they are responsible for international epidemics that facilitate the transmission of disease [5]. The upper respiratory tract infections impact the upper respiratory system, encompassing the nasal cavity, sinuses, pharynx, and larynx. Nasal blockage, pharyngitis, tonsillitis, laryngitis, sinusitis, otitis media, sore throat, and the common cold are all manifestations of this condition [6]. Among both children and adults, the URTI is a highly susceptible area to infection [7]. Mentioned that viruses, such as rhinovirus, coronavirus, respiratory syncytial virus, and a variety of other viruses, cause the vast majority of URTIs [8]. A common bacterium that causes infections in the URTI is Haemophilus influenzae. Bacterial infections in the upper airways include stuffy nose, sore throat, sinusitis, laryngotracheitis, and epiglottitis. Upper respiratory illnesses induced by viruses, including the RSV and the influenza virus [9]. Eighty percent of pediatric URTIs have a viral component. As things stand, bacterial infections start with viral URTIs, and changes in mucosal conditions allow bacteria to proliferate in the respiratory tract, leading to secondary bacterial infections [10]. Diagnosing respiratory infections requires a combination of clinical evaluation, medical history, and physical examination [9]. URTIs can be contracted through multiple respiratory pathways, including the transfer of germs to mucous membranes via contaminated hands and the inhalation of aerosols from an infected person. Transmission mechanisms are affected by variables including ambient temperature, humidity, and population density [11]. Some of the most frequent symptoms of a URTI involve the following: a persistent cough, sore throat, runny nose, congestion in the nasal passages, headache, low-grade fever, facial pressure, sneezing, and malaise. Symptoms typically start anywhere from one to three days following exposure and continue for seven to ten days, though they may linger as long as three weeks [12]. Various populations are at elevated risk of acquiring a URTI, disseminating URTI viruses, or experiencing severe sequelae, including individuals with pre-existing respiratory ailments, smokers, youngsters, and those in regular contact with infected persons. [1] Treatment for URTI is primarily symptomatic, and self-medication plays a significant role; furthermore, there is no generally recognized specialized therapy for this condition. Over-the-counter (OTC) drugs, whether conventional or homeopathic, are most commonly used to treat URTIs [13].

When caring for children with respiratory infections, it is essential to prevent infections and to wash hands thoroughly, especially with young children (those under the age of five). It is critical to control the fever if the child is hot, although dehydration is a common problem for febrile or anorexic children. Children should generally be given the freedom to determine their own dietary needs [14]. Taking vitamin C supplements daily may not only eliminate the risk of contracting a cold, but also studies have shown that they can lessen the duration and intensity of symptoms. On the other hand, taking zinc orally may lessen the duration and intensity of a typical cold [15]. Antibiotics are often administered for UTIs,eventhough the majority of URTIs are vral in origin and antibiotics are ineffective itreatingthem.The overuse of antibiotics le ads to antibiotic resistance, a major public healthissue.In addition to medications, sup portive care is crucial for the management of URTI, especially inpediatric patients [5]. URTIs can be difficult to treat or avoid, but probiotics, especially those containing the species Lactobacillus and Bifidobacterium, have the potential to strengthen the immune system and offer some relief [15]. Comprehensive strategies for the prevention and management of upper respiratory tract infections should be incorporated into the health systems of all nations. Mothers serve as liaisons between healthcare practitioners to instruct children on the significance of hygiene, diet, vaccination, and healthy living conditions. Moreover, mothers are regarded as the individuals most affected when their children are ill [16]. The present study aimed to identify both the sociodemographic characteristics of the mother and biographic information of children with URTIs and the association between them and, also to assess the performance of mothers regarding home care management of URTIs in children under five years of age.

METHODS

2.1 Design of the study A quantitative, descriptive, cross-sectional study was used.
2.2 Setting of the study The study was conducted at the emergency unit and medical unit at Raparin Teaching Hospital for Children (RTHC) in Erbil City, Kurdistan Region/ Iraq.2.3 Study population The study population included mothers who had children under 5 years old who were diagnosed with URTI and admitted to RTHC.2.4 Sample and sampling Taro Yamane's formula was used for sample size estimation.
Yamane’s formula: n = N/(1+N(e)2
n: the sample size
N= the finite population
e = level of significance or margin of error
1= constant value
n = 4601+460(0.05)2 = 213.
A total of 460 URTI cases were recorded during a one-year period, based on data obtained from the statistical department at RTHC. The nonprobability convenience sampling technique was used to recruit 213 mothers as the study sample.
2.5 Inclusion criteria
The inclusion criteria include the following:
1. All mothers who were residents in Erbil Governorate and had a child diagnosed with URTI.
2. Mothers who have children under five years and are diagnosed with URTI.
3. Mothers who desire to participate in the study.
4. Mothers of the Kurdish language.
5. Both genders of children
2.6 Exclusion criteria
Exclusion criteria included children with congenital anomalies and neonatal diseases, such as Down syndrome, autism spectrum disorder, and attention deficit hyperactivity disorder.
2.7 Time of the study
The study was conducted from the 24th of

September 2024 to 24th of September 2025.2.8 Tools of data collection A face-to-face interview technique was used to collect data. A questionnaire format was designed for data collection. The questionnaire consisted of three parts: Part, one included the socio-demographics of the mother. Part two included biographic information of the child. Part three involved questions assessing mothers' performance regarding home care management of URTI in children under five years of age. This part consisted of two domains. The first domain includes the performance of mothers during increased child body temperature, which consisted of 8 items. The second domain, which was about the performance of mothers when their child has coughing, sneezing, and upper airway swelling, consists of 10 items. A five-point Likert scale, always, often, sometimes, rarely, and never was used to assess mothers' performance and included 24 items; the scores ranged as follows: 0 for never, 1 rarely, 2 sometimes, 3 often, 4 always.2.9 Validity and reliability The questionnaire was sent to 13 experts and was validated by a panel of 10 experts. Reliability of the tools was assessed using internal consistency of the tool through the Cronbach's alpha coefficient test, which was 0. 701. Data management and statistical analysis The Statistical Package for the Social Sciences (SPSS, Version 27) was used to assess frequency and percentage, and inferential statistics, such as chi-square, were used to identify the association items and p-value. The p-value is considered significant if it is less than or equal to 0.05.2.10 Ethical considerations Prior to data collection, ethical approval was obtained from the Ethics Committee of Hawler Medical University, College of Nursing, on 20/08/2025 (Approval No. 2443). Verbal consent was obtained from the mothers after the researcher assured them of anonymity and confidentiality. All participants agreed to take part in the study voluntarily.

RESULTS

Table 1 demonstrates the distribution of the two hundred participating mothers based on their socio-demographic characteristics. Based on their age group, the study found that 37.1% of the participating mothers were aged between 25-31 years. Regarding marital status, 99.5% of mothers were married, and only 0.5% were widowed. Also, the study found that the vast majority, 71.8% of the participants, were living in urban areas, while around one-fourth of them were living in both suburban and rural areas. The present study results showed that mothers who are living in urban and suburban areas had more knowledge compared to those who live in rural areas. Adding to that, about half of the mothers 45.5% were living in a middle socioeconomic status, 24.4% of them were living in a low socioeconomic status, and only 30% had a high socioeconomic status. Regarding educational level, 28.6% of mothers were diploma and bachelor graduates, while 11.3% of them were illiterate. Based on occupation, the study found that the majority of participating mothers, 87.3%, were housewives, and only 2.3% were private employees. Table 2 demonstrates the distribution of children's information based on age group, 30%; of children were infants, 46.5% were toddlers, and 23.5% were in the preschool age group. Regarding gender, more than half of the children, 61.5%, were males, and 38.5% were females. Regarding child order in the family, more than half of the children 62% are the youngest in the family. The result showed that 87.3% of children had a negative past medical history. 33.8% of the children were the oldest in the family, while only 4.2% were middle children in the family. Based on feeding type, around

half of the children 45.1% ,were bottle-fed, 35.7% were receiving a normal diet, while only 8% of children were breastfed. By BMI, 31% of children were obese, 23.9% had normal weight, 25.8% were overweight, and 19.2% of children were underweight. Based on medical diagnosis, 36.6% of children had a common cold, 53.5% had tonsillitis, 5.2% had croup, 0.9% had a sore throat, and 3.3% had pertussis.

Regarding the past medical history, 87.3% of children a negative history, while 12.7% of them had a positive past medical history, which was categorized as follows (11.1% had congenital heart disease, 14.8% had respiratory/lung disease, 18.5% had neurological disease, 7.4% had autoimmune disease, 7.4% had a genetic disorder, 18.5% had jaundice, and 22.2% had a history of blood disease).

Table 1: Distribution of mothers based on their Socio-demographic characteristics. (n=213)

Variables		No. (%)
Age of the mother	18-24	59 (27.7)
	25-31	79 (37.1)
	32-38	60 (28.2)
	older than 38	15 (7)
Marital status	Married	212 (99.5)
	Widowed	1 (0.5)
Residency area	Urban	153 (71.8)
	Sub-urban	42 (19.7)
	Rural	18 (8.5)
Socioeconomic status	Low	52 (24.4)
	Middle	97 (45.5)
	High	64 (30)
Educational level	Illiterate	24 (11.3)
	Can read and write	4 (1.9)
	Basic school	47 (22.1)
	Secondary school	42 (19.7)
	High School	35 (16.4)
	Diploma and bachelor's graduate	61 (28.6)
Mother’s occupation	Public Employee	13 (6.1)
	Private employe	5 (2.3)
	Student	2 (0.9)
	Housewife	186 (87.3)
	Self-employed	7 (3.3)

Table 2: Distribution of patient children based on their biographic information (n=213)

Variables		No. (%)
Age of the child	Infant	64 (30)
	Toddler	99 (46.5)
	Preschool age	50 (23.5)
Gender	Male	131 (61.5)
	Female	82 (38.5)
Child order in the family	Oldest	72 (33.8)
	Middle	9 (4.2)
	Youngest	132 (62)
Type of feeding	Breast Feeding	17 (8)
	Bottle feeding	96 (45.1)
	Mixed Feeding	24 (11.3)
	Normal Diet	76 (35.7)
BMI	Underweight	41 (19.2)
	Normal weight	51 (23.9)
	Overweight	55 (25.8)
	Obese	66 (31)
Medical diagnosis	Common cold	78 (36.6)
	Tonsilitis	114 (53.5)
	Croup	11 (5.2)
	Sore throat	2 (0.9)
	Pertussis	7 (3.3)
	Otitis media	1 (0.5)

Table 3 shows that half (52.1%) of the mothers had a good level of performance in both questions regarding how often they give plenty of water to prevent dehydration and about how often they take their children to the pediatrician in case of persistent fever. Less than half of the mothers (41.8%) demonstrated good performance regarding how often they opened windows to reduce fever in their children.

Table 3: Performance of mothers during increased child body temperature (n=213)

Items	Never F. (%)	Rarely F. (%)	Sometimes F. (%)	Often F. (%)	Always F. (%)	M.S	Total M.S	Ev.
How often do you measure the temperature of the child while having a fever?	11 (5.2)	0 (0)	39 (18.3)	86 (40.4)	77 (36.2)	3.02		
How often do you measure your child's temperature at night?	20 (9.4)	18 (8.5)	53 (24.9)	48 (22.5)	74 (34.7)	2.62		
How often do you manage your child's fever by giving only antipyretic (paracetamol) or anti-inflammatory (ibuprofen)?	3 (1.4)	3(1.4)	64 (30)	62 (29.1)	81 (38)	3.01		
How often do you measure your child's temperature after giving an antipyretic (paracetamol) or anti-inflammatory (ibuprofen)?	38 (17.8)	20 (9.4)	63 (29.6)	52 (24.4)	40 (18.8)	2.17	2.62	**Good**
How often do you give your child plenty of water to prevent dehydration while having a fever?	3 (1.4)	1 (0.5)	30 (14.1)	68 (31.9)	111 (52.1)	3.33		
How often do you visit a health institution or pediatrician if your child's fever persists?	4 (1.9)	4 (1.9)	33 (15.5)	61 (28.6)	111 (52.1)	3.27		
How often do you use the antipyretic available at home before consulting a doctor?	59 (27.7)	7 (3.3)	57 (26.8)	41 (19.2)	49 (23)	2.07		
How often do you open the windows to cool the room to reduce your child's fever besides using antipyretics?	89 (41.8)	22 (10.3)	43 (20.2)	33 (15.5)	26 (12.2)	1.46		

Table 4 demonstrates the mothers' performance regarding the management of URTIs. The results of the current study showed that the mothers had a fair level of performance concerning coughing, sneezing, and upper airway swelling during URTIs, and there was an average value of the mean of scores (1.49).

Figure 1 demonstrates overall mothers' performance regarding homecare management of URTIs and shows that most 77% of the mothers had a good performance level, and 23% of them had a fair performance level.

Table 4: Distribution of the mothers' performance regarding care of coughing, sneezing,

Items	Never F. (%)	Rarely F. (%)	Sometimes F. (%)	Often F. (%)	Always F. (%)	M.S	Total M.S	Ev.
How often do you measure the temperature of the child while having a fever?	11 (5.2)	0 (0)	39 (18.3)	86 (40.4)	77 (36.2)	3.02		
How often do you measure your child's temperature at night?	20 (9.4)	18 (8.5)	53 (24.9)	48 (22.5)	74 (34.7)	2.62		
How often do you manage your child's fever by giving only antipyretic (paracetamol) or anti-inflammatory (ibuprofen)?	3 (1.4)	3(1.4)	64 (30)	62 (29.1)	81 (38)	3.01	2.62	Good
How often do you measure your child's temperature after giving an antipyretic (paracetamol) or anti-inflammatory (ibuprofen)?	38 (17.8)	20 (9.4)	63 (29.6)	52 (24.4)	40 (18.8)	2.17		
How often do you give your child plenty of water to prevent dehydration while	3 (1.4)	1 (0.5)	30 (14.1)	68 (31.9)	111 (52.1)	3.33		
How often do you visit a health institution or pediatrician if your child's fever	4 (1.9)	4 (1.9)	33 (15.5)	61 (28.6)	111 (52.1)	3.27		
How often do you use the antipyretic available at home before consulting a	59 (27.7)	7 (3.3)	57 (26.8)	41 (19.2)	49 (23)	2.07		
How often do you open the windows to cool the room to reduce your child's	89 (41.8)	22 (10.3)	43 (20.2)	33 (15.5)	26 (12.2)	1.46		

Figure 1: Distribution of overall mothers' performance

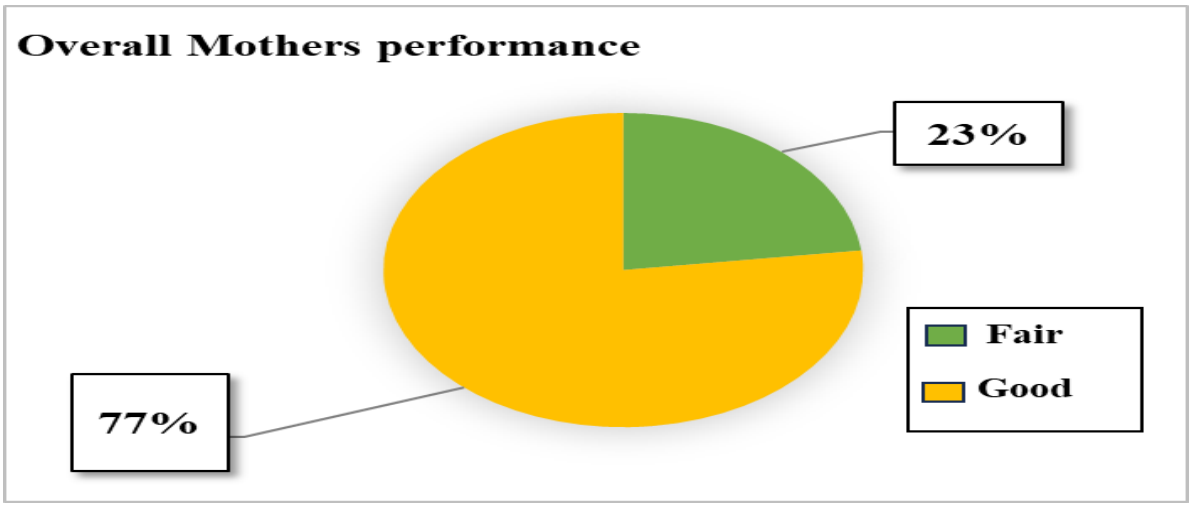

Table 5 illustrates the association between mothers' sociodemographic characteristics and their performance regarding homecare management for URTI. The study found that there is a significant association (0.033) between mothers' level of education and their homecare management performance, while there was no association between the age of the mother, residency area, and marital status with their performance. Also, the study discovered that there is a significant association (0.011) between mothers' occupation and their level of performance. Nevertheless, no significant association was observed between mothers' socioeconomic status and their performance in managing URTI at home.

Table 6 demonstrates the association between the child's biographic information and the mother's home care management of URTI. The results of the study found that there was a highly significant association (0.009) between the child's age and the mothers' level of performance regarding home care management of URTI, while there was no association between the child's gender and the mothers' performance. The study also discovered that there was a significant association (0.028) between the child's order in the family and a highly significant association (0.021) between the type of feeding given to the child and the mother's performance, and there is a significant association (0.050) between the child's body mass index (BMI)

Table 5: Association between mothers' sociodemographic characteristics and performance of mothers during increased child body temperature. (n=213)

	Homecare management	Always No. (%)	Often No. (%)	Sometimes No. (%)	Rarely No. (%)	Never No. (%)	P-value
Sociodemographic							
age of the mother	18-24	12 (20.3)	11 (18.6)	1 (30.5)	14 (23.7)	4 (6.8)	0.291
	25-31	8 (10.1)	19 (24.1)	34 (43)	14 (17.7)	4 (5.1)	N.S.
	32-38	4 (6.7)	6 (10)	27 (45)	20 (33.3)	3 (5)	
	older than 38	2 (13.3)	3 (20)	7 (46.7)	3 (20)	0 (0)	
Marital status	Married	26 (12.3)	39 (18.4)	86 (40.6)	50 (23.6)	11 (5.2)	0.526
	Widowed	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	N.S.
Residency area	Urban	18 (11.8)	30 (19.6)	60 (39.2)	37 (24.2)	8 (5.2)	0.461
	Sub-urban	6 (14.3)	5 (11.9)	17 (40.5)	11 (26.2)	3 (7.1)	N.S.
	Rural	2 (11.1)	4 (22.2)	9 (50)	3 (16.7)	0 (0)	

Table 6: Association between mothers' sociodemographic characteristics and performance of mothers when their child has coughing, sneezing, and upper airway swelling (n=213)

Homecare management	Sociodemographic	Always No. (%)	Often No. (%)	Sometimes No. (%)	Rarely No. (%)	Never No. (%)	P-value
Socioeconomic status	Low	8 (15.4)	12 (23.1)	15 (28.8)	14 (26.9)	3 (5.8)	
	Middle	14 (14.4)	15 (15.5)	43 (44.3)	20 (20.6)	5 (5.2)	
	High	4 (6.3)	12 (18.8)	28 (43.8)	17 (26.6)	3 (4.7)	0.545 N.S.
Educational level	Illiterate	4 (16.7)	7 (29.2)	8 33.3)	5 (20.8)	0 (0)	
	Can read and write	0 (0)	1 (25)	3 (75)	0 (0)	0 (0)	
	Basic school	5 (10.6)	8 (17)	21 (44.7)	10 (21.3)	3 (6.4)	
	Secondary school	7 (16.7)	11 (26.2)	11 (26.2)	10 (23.8)	3 (7.1)	
	High School	8 (22.9)	4 (11.4)	15 (42.9)	6 (17.1)	2 (5.7)	0.033 S
	Diploma and bachelor graduate	2 (3.3)	8 (13.1)	28 (45.9)	20 (32.8)	3 (4.9)	
Mother's occupation	Public Employee	0 (0)	1 (7.7)	3 (23.1)	9 (69.2)	0 (0)	
	Private employe	0 (0)	0 (0)	3 (60)	0 (0)	2 (40)	
	Student	0 (0)	0 (0)	1 (50)	0 (0)	1 (50)	0.011 S
	Housewife	25 (13.4)	38 (20.4)	76 (40.9)	39 (21)	8 (4.3)	
	Self-employed	1 (14.3)	0 (0)	3 (42.9)	3 (42.9)	0 (0)	

Table 7 and table 8 show an association between a child's biographic information and the mothers' performance. As it is shown in the table, the results of the study found that there is no significant association between a child's medical diagnosis mothers home care level, and the study also found that there is no association between a child's past medical history, whether positive or negative, and the mother's performance level.

Table 7: Association between the child's biographic information and performance of mothers during increased child body temperature. (n=213)

Homecare management / Child's biographic information		Always No. (%)	Often No. (%)	Sometimes No. (%)	Rarely No. (%)	Never No. (%)	P-value
Age of child	Infant	11 (17.2)	18 (28.1)	23 (5.9)	10 (15.6)	2 (3.1)	
	Toddler	11 (11.1)	15 (15.2)	46 (46.5)	24 (24.2)	3 (3)	0.009
	Preschool age	4 (8)	6 (12)	17 (34)	17 (34)	6 (12)	S
Gender	Male	20 (15.3)	28 (21.4)	49 (37.4)	30 (22.9)	4 (3.1)	
	Female	6 (7.3)	11 (13.4)	37 (45.1)	21 (25.6)	7 (8.5)	0.085 N.S.
Child order in the family	Oldest	12 (16.7)	11 (15.3)	25 (34.7)	18 (25)	6 (8.3)	
	Middle	0 (0)	3 (33.3)	4 (44.4)	1 (11.1)	1 (11.1)	0.028
	Youngest	14 (10.6)	25 (18.9)	57 (43.2)	32 (24.2)	4 (3)	S
Type of feeding	Breast Feeding	1 (5.9)	5 (29.4)	7 (41.2)	4 (23.5)	0 (0)	
	Bottle feeding	17 (17.7)	18 (18.8)	37 (38.5)	21 (21.9)	3 (3.1)	0.021
	Mixed Feeding	3 (12.5)	7 (29.2)	9 (37.5)	5 (20.8)	0 (0)	S
	Normal Diet	5 (6.6)	9 (11.8)	33 (43.4)	21 (27.6)	8 (10.5)	
BMI	Underweight	4 (9.8)	7 (17.1)	17 (41.5)	8 (19.5)	5 (12.2)	
	Normal weight	1 (2)	8 (15.7)	24 (47.1)	16 (31.4)	2 (3.9)	0.050
	Overweight	6 (10.9)	11 (20)	24 (43.6)	13 (23.6)	1 (1.8)	S
	Obese	15 (22.7)	13 (19.7)	21 (31.8)	14 (21.2)	3 (4.5)	

Table 8: Association between the child's biographic information and performance of mothers when their child has coughing, sneezing, and upper airway swelling (n=213)

Homecare management / Child's biographic information		Always No. (%)	Often No. (%)	Sometimes No. (%)	Rarely No. (%)	Never No. (%)	P-value
Medical diagnosis	Common cold	12 (15.4)	15 (19.2)	29 (37.2)	18 (23.1)	4 (5.1)	
	Tonsilitis	12 (10.5)	19 (16.7)	48 (42.1)	28 (24.6)	7 (6.1)	0.383
	Croup	0 (0)	4 (36.4)	5 (45.5)	2 (18.2)	0 (0)	N.S.
	Sore throat	0 (0)	0 (0)	2 (100)	0 (0)	0 (0)	
	Pertussis	2 (28.6)	1 (14.3)	1 (14.3)	3 (42.9)	0 (0)	
	Otitis media	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	
Past Medical History	Negative	26 (14.0)	32 (17.2)	77 (41.4)	41 (22)	10 (5.4)	0.317
	Positive	0 (0)	7 (25.9)	9 (33.3)	10 (37)	1 (3.7)	N.S.
Specify	Congenital heart disease	0 (0)	2 (66.7)	1 (33.3)	0 (0)	0 (0)	
	Respiratory / Lung disease	0 (0)	0 (0)	2 (50)	2 (50)	0 (0)	
	Neurologic disease	0 (0)	0 (0)	1 (20)	4 (80)	0 (0)	0.083
	Autoimmune disease	0 (0)	0 (0)	1 (50)	1 (50)	0 (0)	N.S.
	Genetic disorder	0 (0)	1 (50)	0 (0)	0 (0)	1 (50)	
	jaundice	0 (0)	2 (40)	1 20)	2 (40)	0 (0)	
	blood disease	0 (0)	2 (33.3)	3 (50)	1 (16.7)	0 (0)	

DISCUSSION

Regarding the socio-demographic characteristics of the mothers, in the current study, about four-fifths of the mothers were housewives. A 2016 study conducted in Egypt found that two-thirds of the mothers (67%) were housewives, which is comparable to the findings of our study [5]. Around half of the participating mothers were aged between 18-38 years, while more than one-third of participants were aged between 25 and 31 years. This is similar to a study done in Babylon province, Iraq, in 2019, which showed that the majority of mothers, 56%, were aged between 18-29 years [14]. A study performed in Balochistan in 2022 found that 48.7% of their participants were uneducated. This finding contrasts with our study, in which more than four-fifths of the mothers were educated [17]. In the current study, about ninety-nine hundredths of participants were married; this is closely similar to a study that was carried out in Egypt in 2016, which found that (98%) of participating mothers were married, and only (1%) were widowed and (1%) were divorced. In their study, approximately 75% of mothers lived in rural areas and 25% in urban areas, which contrasts with our study, where around 70% of mothers resided in urban areas [5].The result of a study done by Abimbola in Nigeria in 2016 found that most of the children (43.1%) were firstborn children, about (42.1%) were between (1-2) years old and (41%) were between (2-4) years old, which does not agree with our study, which found that more than three-fifths of children were the youngest and around two fifths were middle and oldest in the family order [18]. Another study done by Hamdy in 2022 revealed that most of the children (54%) were male, which is in harmony with our study, which revealed that more than half of the children were males. Adding to that, Hamdy and his friends in 2022 found that (39.6%) of mothers were breastfeeding their children and (8.8%) were bottle-feeding their children, which is in disagreement with our study, as in our study about half of the mothers were bottle-feeding their children, while only two-twenty-fifths of the mother were breastfeeding them [16]. A recent study found that more than half of the children had tonsillitis, making it the most common type of URTI. This finding is consistent with a 2024 study by Alwan, which reported that tonsillitis is the most prevalent URTI, particularly among boys [19]. Another study performed by Abdulkareem in 2021 found that there is a significant association between a child's age and type of feeding with mothers' performance, which is in harmony with our study, which showed that there is a significant association between a child's age and their type of feeding with mothers' level of performance [14].This indicates that children who are breastfed are less prone to infections than those who were bottle-fed, as supported by a study performed in Mexico in 2021 [20]. A previous study, which was conducted by Farhad in Iran, showed that the mothers who had higher levels of education had better performance levels, which is similar to our study, which found that there is a significant association between the level of education and mothers' performance [21].In another previous study, done on the mothers who had low socioeconomic status, they had poor performance, which is in contrast to our study, which found that there is no association between mothers' socioeconomic status and their performance level [22]. Our study found that there is a significant association between mothers' occupation and their level of performance, which disagrees with a study performed by Teck and his friends in Malaysia, which found that there is no association between mothers'

occupation and level of performance [23]. While another study done in Iraq in 2024 found that there is a strong significant association between mothers' occupations and their level of performance, which goes along with our study that found a significant association between both mothers' occupations and their levels of performance [24].

CONCLUSION

The current study concluded that the majority of mothers were housewives, and most of them had a middle socioeconomic status. Most of the mothers who participated in the study were aged between 25 and 31 years old, while the major medical diagnosis of their children was tonsillitis, which accounted for (53.5%).The study revealed that there is an association between child biographic information, mothers' socioeconomic status, and mothers' level of performance, and there was an association between the mothers' education level and occupation with their performance, and this suggests that educational level and occupation play a key role in shaping mothers' ability to care for children with URTIs. Acknowledgment I would like to thank each mother and child in the study setting for their help and cooperation during the study period, and I appreciate the great efforts of the supervisors to accomplish this work.

Conflict of interest

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