IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 7, Issue 6 Ver. VII. (Nov.-Dec.2018), PP 54-64
www.iosrjournals.org

Mothers' Practices Regarding Management of Common Gastrointestinal Problems Affecting Their Young Children.

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Abstract: *Children under five years are more vulnerable for many gastrointestinal problems. Healthy practices regarding these problems adopted by mothers help in raising the health status of their children, thereby lessens the morbidity and mortality of children.* ***Aim****: The study aims to assess mothers' practices regarding management of common gastrointestinal (GIT) problems affecting their young children.* ***Setting****: The study was carried out at Medical Units and Outpatient Department of Children University Hospital at El-Shatby, Alexandria.* ***Subjects:*** *The subjects of present study comprised 100 mothers having children less than five years.* ***Tool:*** *one tool was used to collect data namely Mothers' Practices of Common Gastrointestinal Problems Structured Interview Schedule.* ***Results:*** *The main study findings showed that the majority of mothers reported that they gave ORS and continued feeding during diarrheal attacks. About three quarters of mothers reported that they used suppositories for their constipated children. Three quarters* ***of the mothers*** *gave medication in case of vomiting. Nearly two thirds of mothers gave antispasmodics for management of colic and the majority of them administered oral antifungal drugs to treat thrush stomatitis affected their young children.* ***Conclusion:*** *Mothers' practices regarding common gastrointestinal problems were either good or unsatisfactory.* ***Recommendations:*** *Pediatric nurses should provide educational sessions and mother classes for mothers regarding management of their children GIT problems. Handouts, brochures or simple books about management of common GIT problems affecting young children should also be available for mothers in pediatric hospitals.*

Key wards: *Mothers' Management, Gastrointestinal Problems, young children.*

Date of Submission: 27-11-2018 Date of acceptance: 08-12-2018

I. Introduction

The gastrointestinal tract (GIT) of young children is sensitive and reactive **system**. Infants and young children are often the most vulnerable age group to many GIT problems due to several physiological, developmental and immunological factors. The most common GIT problems affecting young children under 5 years include diarrhea, constipation, vomiting, colic and thrush stomatitis. Management of these problems presents a challenge facing mothers. So, educating mothers how to deal with their young children's GIT problems is considered one of the main responsibilities of pediatric nurses[1, 2].

Diarrhea refers to frequent passage of watery stool than the child's usual habit with excessive loss of fluids and electrolytes. It is often caused by a variety of viral, bacterial and parasitic pathogens. Acute diarrhea is usually self-limited and subsides without specific treatment [2, 3]. Dehydration is one of the main complications caused by diarrhea and it could cause death if the fluid replacement is inappropriate. Furthermore, diarrhea is also a leading cause of malnutrition in children under five years old. According to World Health Organization 2014, there are nearly 1.7 billion cases of diarrheal disease every year and it is the second leading cause of death among under five years children. Most of the mortality cases are present in developing countries [3].

According to Center of Disease Control and Prevention (CDC), adequate fluid and electrolyte replacement and maintenance are the keys of managing diarrheal illnesses [4]. Oral rehydration solution(ORS) enhances and promotes the reabsorption of sodium and water and reduces vomiting, volume loss from diarrhea and duration of a diarrheal episode . Several studies have linked diarrhea and increased stool zinc loss and reduced tissue levels of zinc. So, zinc supplementation was beneficial for treating children with acute and persistent diarrhea and as a prophylactic supplement for decreasing the incidence of diarrheal disease. Furthermore, zinc-fortified ORS shows less stool frequencies than standard ORS. Therefore, pediatric nurses should educate the mothers about the use of home available fluids, ORS and zinc supplements during children's diarrheal attacks[5,6]. Feeding during diarrheal attacks lessens the severity and duration of the illness. So, continuing the child's breast/formula feeding or regular diet is advisable [7,8]. Thus, an episode of diarrhea could be managed properly at home and the danger could be reduced. Guiding mothers concerning the proper hand washing technique, personal hygiene, and disposal of soiled diapers, clean water supply and hygienic food preparation are also other important responsibilities of pediatric nurses [9,10].

Constipation is the second common GIT problems affecting young children accounting for 3% of visits to pediatricians [(11)].Constipation refers to difficulty of stool passage or infrequent passage of hard stool associated with straining, abdominal pain or withholding behaviors [(11)]. The causes of constipation are varied according to the child's developmental stage. Constipation during infancy is rare and usually caused by excessive milk intake or the transition from formula to cow`s milk. In toddler, constipation is often caused by toilet training practices. Forced training may cause the child to withhold the stool. Preschooler children may develop constipation when starting nursery school. Bathrooms in this setting may lack privacy and cleanless, as a result, the urge to defecate is suppressed during school hours. Continual suppression of defecation can lead to constipation. Additionally, a previously painful bowel movement because of a hard stool can result in fear of having a bowel movement. Decreased fluids and fibers in children's diet also play a role in occurrence of constipation [(11,12)].
The pediatric nurse should instruct mothers about how to establish a regular pattern of defecation for their children by allowing them to sit on the toilet after a meal for a reasonable amount of time (5-10 minutes) [(13,14)].Dietary modification for the constipated children should also be emphasized. The mothers should be encouraged to provide more dietary fibrous for their children such as: whole grain breads and cereals, bran, raw vegetables and fruits. Stool-softening agents such as lactulose may also be helpful [(15,16)]. Over the counter laxatives such as oral medications and suppositories can help in maintaining bowel regularity in some children. Pediatric nurse should guide the mothers concerning administration of such medication. Constipation could also be treated by cleansing the bowel of hard or impacted stool which is accomplished with enema. Pediatric nurse should instruct mothers regarding the appropriate way to administer enema to their constipated children[(5,17)].
Vomiting is the forceful ejection of gastric contents through the mouth. Vomiting is often one of the symptoms of many illnesses. So, it is self -limited and resolved without any specific treatment. Antiemetic drug may be indicated in some cases[(11,18)]. Nursing efforts are directed toward maintaining hydration or preventing metabolic alkalosis. If vomiting is persistent and lead to dehydration, oral rehydration or parenteral fluid may be indicated. Pediatric nurse should advise the mothers to follow certain measures to help their children such as positioning the infant or young child forward to prevent aspiration, providing small frequent feedings which are preferable and observing the child for evidence of dehydration. Once vomiting has abated, more amounts of fluids can be offered followed by gradual resumption of the regular diet[(5 ,8, 19)].

Colic is one of the most common health problems seen in infants. Colic is reported to occur in 5% to 30% of all infants[(20)] . The colicky episode is characterized by loud, persistent crying, passage of gases and flexing of the hips toward the abdomen [(5, 11, 21)]. Potential causes of colic include too rapid feeding, over eating, swallowing of excessive air and improper feeding techniques and cow's milk intolerance. Furthermore, colic is also observed among infants of anxious mothers and those who consume certain types of food during lactation period such as eggs, peanuts, soy and fish. Mothers of colicky infants or young children need to remember that this is a harmless and self-limiting condition.

Pediatric nurse should instruct the mothers to follow some measures that may be helpful to their infants such as placing the colicky infant in prone position over a covered hot-water bottle or heated towel. In addition, providing abdominal massage could be helpful[(5,11)]. Gentle massage to the child's back while he is lying in prone position and rocking him and applying gentle pressure to his abdomen are also effective measures for reliving colic . The mothers should also be instructed to eructate their infants during and after feedings regularly and place them in an upright position after feeding. Providing warm fluids has been proved to be effective in relieving colic. The pediatric nurse should also guide the mothers about the appropriate use of the prescribed medications such sedatives, anti-spasmodic and anti-flatulent [(22)].

Thrush stomatitis is a fungal infection caused mainly by candida albican. It may be acquired due to inadequate sterilization of teats and bottles or from mother's breast. Thrush stomatitis is characterized by presence of white patches resembling milk curds over the mucous membrane of the mouth including the tongue, palate and inner aspects of the cheeks. Lesions cause discomfort and sometimes interfere with sucking and swallowing [(11, 17, 23)]. Pediatric nurse has important role in advising mothers to follow some measures to control the condition .Absolute hygienic care such as rinsing the infant's mouth with plain water after each feeding in addition to thorough washing of the reusable teats, bottles and pacifiers and boiling them for at least twenty minutes is recommended[(5,11)]. Moreover, all the articles that enter the infants' mouth such as toys or pacifiers should be also washed. Topical applications of 1 ml Nystatin (Mycostatin) over the surface of the oral cavity four times a day using an applicator or syringe after feedings is usually used to treat this infection. The mothers should be also instructed to wash their breasts frequently and paint their nipples with local antifungal to prevent reinfection. Gentian violet solution may be used in addition to one of the antifungals in chronic cases of oral thrush [(24-26)].

It is important to assess mothers' practices in dealing with the mentioned GIT problems. Some of these practices are appropriate and should be encouraged, others are wrong that may lead to harmful consequences on the child. So, the pediatric nurses can recommend simple measures that help mothers to deal effectively with such problems beside medical treatment.

Aim of the Study: The aim of the present study is to assess mothers' practices regarding management of common gastrointestinal problems affecting their young children.

Research question: What are mothers' practices regarding management of common gastrointestinal problems affecting their young children?

II. Materials and method

I-Materials

Research design:

A retrospective descriptive design was used.

Settings:

The current study was conducted at Medical Units and Outpatient Departments of Children University Hospital at El-Shatby, Alexandria.

Subjects:

Convenient sample of 100 mothers from the previously mentioned settings having children less than five years of age comprised the study subjects.

Tool: one tool was used to collect data.

Mothers' Practices in Management of Common Gastrointestinal Problems structured interview schedule. This tool was developed by the researcher after thorough review of literature to assess Mothers' practices regarding management of common gastrointestinal problems affecting their young children.

It consisted of two parts:

Part I: characteristics of mothers: It included items such as mothers' age, educational level, residence, and number of children.

Part II: mothers' practices in management of common gastrointestinal problems: It included five categories as follows:

1. **Mothers' practices in management of children's diarrhea** such as: Mothers' initial response regarding children's diarrhea, stopping/continuing feeding, giving extra fluids, ORS packets and zinc supplementation.
2. **Mothers' practices in management of children's constipation:** such as using suppositories, increasing oral fluid intake, providing natural laxative fluids and performing anal stimulation
3. **Mothers' practices in management of children's vomiting**: such as giving antiemetic and stopping/continuing feeding.
4. **Mothers' practices in management of children's colic:** such as giving antispasmodic drugs, giving warm fluids, placing the child in prone position and performing back message in prone position.
5. **Mothers' practices in management of children's thrush stomatitis:** such as applying gentian violet, giving antifungal drugs and applying traditional prescriptions.

II- Method

1. Official letters were directed to the responsible authorities of Children University Hospital at El-Shatby, Alexandria in order to obtain their approval to collect the data and facilitate the research implementation after explaining its purpose.
2. The tool was developed by the researcher, after thorough review of related literature.
3. The tool was submitted to a jury of five experts in pediatric nursing field for content validity. Based on their comments; necessary modifications were done.
4. The reliability of the tool was done by measuring the internal consistency of its items using the Cronbach alpha coefficient where r = 0.82.
5. A pilot study was carried out on 10 mothers from the previously mentioned setting to test the feasibility, applicability and clarity of the tool and some modifications were done. Those mothers were excluded from the study subjects.
6. Every mother was interviewed individually by the researcher to collect the necessary data at the waiting area in the out-patient department and medical unites. The duration of each interview lasted from 20 to 30 minutes.
7. Data were collected over a three months period extending from March to May 2015.
8. **Ethical Considerations:**

- Written informed consents were obtained from the mothers after explaining the aim of the study and their right to refuse to participate in the study or to withdraw at any time.

- Confidentiality of the collected data and privacy were maintained during implementation of the study.

9. **Scoring of Mothers' practices:**

- A scoring system was done for mothers' practices regarding the management of common gastrointestinal problems affecting their young children (diarrhea, constipation, vomiting, colic and thrush stomatitis). Each item of practices was scored as follows; one for correct response, and zero for incorrect response. The mothers` practices were considered accurate according the literatures. Total score was obtained and then a percent score was calculated. Then the obtained percent score of mothers' practices is transformed into a qualitative manner as follows:

➢ Good = 65% and more.

➢ Satisfactory = 50% to less than 65%.

➢ Unsatisfactory = less than 50%.

Statistical Analysis:

- After the data collection, they were coded and transferred into specially designed formats to be suitable for computer feeding using statistical software SPSS version 16. Following data entry, checking and verification processes were carried out to avoid any error during data entry.
- Microsoft office Excel software was used to collect the total score and construct the needed graphs.
- The statistical analysis was done for the data after its arrangement.

The following statistical measures were used:

➢ **Descriptive Statistics:**

1. Number and percentage were used for describing and summarizing qualitative data.
2. Minimum and maximum were used for describing and summarizing quantitative data.
3. Mean ($\bar{X}$) was used to measure central tendency in statistical tests of significance.
4. Standard deviation (**SD**) is an average of the deviations from the mean. It was used for measuring the degree of variability in a set of scores.

III. Results

Table (1) shows characteristics of the mothers. It was found that more than half of the mothers (58%) aged less than 30 years old while the rest of them (42%) aged 30 years and more with a mean age 27.4±4.9 years. As regard the level of education, it was found that 41% of the mothers had university education while, more than one quarter of them (29%) had secondary education. Concerning place of residence, it was found that more than half of the mothers (55 %) lived in urban areas compared to 45 % who lived in rural one. Nearly three quarters of the mothers (72%) had one to two children compared to 28 % of them who had three children and more.

Table (2) portrays mothers' practices regarding management of diarrhea. It is obvious that more than half of mothers (56%) reported that they consulted the pediatrician immediately as the child gets ill. Moreover, 14% of mothers asked the pharmacist advice. While, 30% of them administered the previously prescribed medication as an initial response regarding children's diarrhea. Among mothers who self-medicate their children, 70% of them administered intestinal antiseptic (Antinal) in order to manage their children's diarrhea. Regarding mothers' feeding practices during diarrhea, the table illustrates that the vast majority of the mothers (90%) didn't stop feeding during children's diarrheal attacks. Furthermore, two thirds of the mothers (68%) gave extra fluid to replace fluid loss during diarrhea. Among those mothers who provided extra fluids during diarrhea, the table revealed that 30.9 %, 20.6% and 17.4% of them gave tea with lemon, beverage (7- Up), and rice water respectively. In addition, the majority of mothers (81%) reported that they gave ORS packets in case of children's diarrhea. On the other hand, the same table illustrates that one third of mothers (33%) mentioned that they gave zinc supplements for diarrheal management.

Mothers' practices regarding management of constipation are illustrated in **table (3).** It is obvious that the highest percentage of mothers (70%) reported that they used suppositories in the management of their children constipation. While, almost half of mothers (49%) provided natural laxatives fluids such as fenugreek, anise and senna herb. Furthermore, 39% of mothers added fruits/vegetables to their children's' meal. On the other hand, mothers who performed anal stimulation or enema represented 26% and 3% respectively. The table also illustrates that only 14 % of mothers were concerned with establishing regular pattern of defecation for their children. The table also shows that 41.4% of mothers who used suppositories gave it without pediatrician prescription.

Table (4) shows mothers' practices regarding management of vomiting. It is clear that more than three quarters of mothers (76%) reported that they administered antiemetic as a management of their children's

vomiting and 77.6% of these antiemetics were administered based on pediatrician prescription. On the contrary, only 17% of mothers reported that they stopped feeding to reduce frequency of vomiting.

Table (5) clarifies mothers' practices regarding management of colic. It is clear that mothers followed variety of practices in the management of colic. Nearly two thirds of mothers (62%) administered antispasmodic drugs in case of children's colic. Fortunately, 62.9% of these antispasmodic drugs were prescribed by the pediatrician and 29.1% of them were given without pediatrician prescription. In addition, almost half of mothers (49%) reported that they gave warm fluids to relieve their young children's colic. Concerning positioning, more than one quarter of the mothers (29%) placed the child in prone position to alleviate gases and only 14% of them performed back message for their children while they were in prone position.

Mothers' practices regarding management of thrush stomatitis are illustrated in **table (6)**. It is clear that only 84% of the mothers had experience with children's thrush stomatitis. The majority of these mothers (83.3%) reported that they gave antifungal drugs or oral gels in the management of children's stomatitis and 10.7% of them mentioned that they gave traditional prescriptions such as Tahini. On the other hand, only 6% of them reported that they applied gentian violet.

Mothers' total percent scores of practices regarding management of common gastrointestinal problems of their young children are presented in **table (7) and figure (1)**. It is obvious that almost half of the mothers (49%) obtained good total scores of practices and 47% of them had unsatisfactory scores, while only 4% of mothers obtained satisfactory scores.

IV. Discussion

Many of the gastrointestinal problems affecting young children such as diarrhea, constipation, colic, vomiting and stomatitis could be simply managed at home without any pharmacological interventions. Mothers' practices in dealing with such problems are important for maintaining their children's wellbeing[(11)].

Acute diarrhea is a major worldwide problem that frequently affects infants and young children. The finding of the present study revealed that more than half of the mothers reported that they consulted pediatrician to receive treatment as initial response to child diarrhea. This result is supported by the finding of Abdinia (2014) [(27)]. This finding reflects how those mothers were aware of the seriousness of a problem like diarrhea. So, they tended to seek medical help to manage their children's problems effectively. Mothers' educational level could also explain such finding. The present study results revealed that nearly three quarters of the mothers had either university or secondary education. Education help to up-date mothers' knowledge practices and increases their awareness. This issue is supported by Abdinia (2014) [(27)] who mentioned that there was a direct relationship between Mothers' education and performance in managing diarrhea [(27)]. On the other hand, the finding of the current study revealed that nearly one third of mothers reported that they gave medication for diarrhea by themselves (self-medication). Previous experiences in rearing other children could explain this finding.

According to World Health Organization, giving ORS to the dehydrated children was the corner stone in reducing children mortality in the developing countries [(3)]. In this regard, the results of the current study illustrated that more than three quarters of mothers reported that they gave ORS for their children when they suffered from diarrhea. Mothers' educational level and previous experience in rearing children as well as health education that could be provided in the different health care settings regarding diarrhea management could also help mothers to deal effectively with their young children with diarrheal attacks and explain such results. Besides, the use of ORS among high percentage of mothers could be also related to the health educational programs that were provided in mass media especially through the Egyptian TV that focused on the importance of ORS and the method of its preparation and administration to the dehydrated child. Mothers may also follow this proper health practices based on the advices of their relatives who had an experience in the diarrhea management. These findings are congruent with the findings of Park (2009)[(28)] and Khalili et al. (2013)[(29)].

Administration of zinc supplementation plays an important role in reducing severity and duration of diarrhea among children [(30)]. Unfortunately, the results of the current study illustrated that only one third of mothers mentioned that they gave zinc supplements in managing children' diarrhea. This could be related to lack of mothers' awareness regarding the importance of zinc supplements in reducing the volume and frequency of diarrheal attacks. Besides, many pediatricians still don't value the role of zinc supplements and consequently they don't prescribe it. This finding is consistent with the findings of an Indian survey (2008)[(30)] and Gebremedhin et al. (2016)[(31)] .

Giving Extra fluids is an integral part of children's diarrhea management. Integrated Management of Childhood Illnesses (IMCI) emphasized the use of homemade fluids in its plan of diarrheal management. Madkour et al (1997) reported that only one quarter of the Egyptian mothers gave more fluids during diarrhea other than breast milk [(32)].The finding of the present study highlighted a dramatic change in Egyptian mothers' practices where the majority of them mentioned that they didn't stop feeding during their children's diarrheal attack while two thirds of them gave extra fluids like rice water, tea with lemon and others. This result is

congruent with the findings of Khalili et al. (2013)[29] who found that the majority of the Iranian mothers didn't stop breast-feeding during diarrheal attack[29].

Using such fluids beside treatment could be attributed to several factors. These prescriptions are cheap, safe and available at all homes. Moreover, these prescriptions were previously used in managing diarrhea and probably had successful effect in decreasing its frequency. In addition, using of these prescriptions is usually advised by grandmothers or relatives especially in rural areas where most of mothers lived in extended families and received advices from many family members. As clarified in the results of the current study, about half of the mothers lived in rural areas. Moreover, the results of the current study are in the same line with the finding of Shah et al (2012) [33].

The results of the current study revealed that one fifth of mothers administered Nifuroxazide (Antinal) as intestinal antiseptics without pediatricians' prescription. These findings could be due to repeated prescription of such drug in previous attacks of diarrhea among their children. In addition, many mothers are convinced that using such drug could kill the causative microorganisms of diarrhea. Similar findings were reported by Alameddine et al. (2010) [34].

Mothers' practices concerning management of constipation in the present study reflected deficits in some aspects of care provided for children. Using suppositories was the main approach that was followed by nearly three-quarters of mothers. In addition, more than half of mothers reported that they gave it without consultation. The use of suppositories among high percent of mothers could be explained by the fact that suppositories have fast and effective action as they relieve child discomfort quickly so that mothers have more tendencies to use it. These results are consistent with the findings of Rubin and Dale (2006)[35] who reported that suppositories are suitable for managing chronic constipation among infants and young children.

The results of the current study showed that only one third of mothers mentioned that they gave diet containing fibers (fruit and vegetables) and one half of them increased fluid intake as measures in the management of their children's constipation. Lack of mothers' awareness of the therapeutic effect of using natural laxatives and increasing fluids intake on regulating bowel movement could explain these findings. These results are incongruent with the recommendations of the North American Society for Pediatric Gastroenterology (2006)[36] who developed algorithm for management of children's constipation and reported that laxatives including Glycerin suppositories may be beneficial as the last choice in the treatment of constipation. Similarly, Xinias and Mavroudi (2015)[37] and Tabbers et al. (2014)[38] emphasized that adequate intake of fiber, increased fluid intake are effective measures for managing constipation in infants older than 6 months of age.

Antiemetic drugs play an important role in the treatment of vomiting among children with acute gastroenteritis [39]. Mothers' responses concerning management of vomiting for their children in the present study findings revealed that more than three quarters of them gave antiemetic and more than half of these mothers reported that they gave such medications after consulting pediatrician. These findings could be justified by the refusal of many pharmacists to give antiemetic without pediatrician prescription to avoid the adverse effect of wrong dose of such medications. Moreover, medical problem like vomiting cause much fear and anxiety for mothers especially those who have infants and young children whose general conditions are affected significantly by vomiting. So, mothers' concern is mainly focused on stopping vomiting to restore their children health. Additionally, the rapid deterioration of the child's condition due to the occurrence of serious complications of vomiting such as dehydration and acid base disturbance which usually associated with change in child's level of consciousness and muscle tone could also explain the immediate seeking of medical advice to receive the appropriate medical treatment among more than half of mothers in the current study.

The result of the current study are congruent with the findings of Das et al. (2013)[40] and Freedman et al. (2013 and 2015)[41,42] who concluded that antiemetics are effective for the management of gastroenteritis in children. Fedorowicz et al. (2011)[43] also reported that antiemtics such as ondansetron reduced the episodes and duration of vomiting and hospital admission. Similar findings were reported by Rachel et al. (2009)[44] and Carter et al. (2012)[45].

There are several Maternal factors that could interfere with dealing with colicky infants. These factors encompass mothers' anxiety, irritably and limited experience in child rearing. Moreover, young mothers and those who are occupied with a lot of home responsibilities found difficulty in dealing with their colicky infants. Using simple practices such as back massage and positioning to alleviate gases are considered time consuming and require patience. So, mothers prefer to use antispasmodics as a fast measure to decrease pain and promote comfort to their children. These reasons may explain the current study results which revealed that nearly two-thirds of mothers reported giving antispasmodics for their children in case of colic. As clarified in the results of the present study, about half of the mothers were in the age group 30 years or more and all of them had previous experience in rearing children. Furthermore, about one quarter of them had 3 or more children. The solid experiences of those mothers rendered them more aware of measures that could help their colicky children. From another perspective, pediatricians always tend to prescribe antispasmodics for colicky children and they

are not concerned with advising mothers about simple measures that may help them to deal with their colicky infants. For many mothers, it is thought that any medical problem should be treated with medication.

These results are consistent with the findings of Chinawa et al.(2013)[46] and Odetola et al. (2017)[47]. In contrary, Al-Shehri et al. (2016) and [48]Sheidaei et al. (2016)[49] reported that performing massaging significantly improved infantile colic symptoms.

Thrush stomatitis is one of the most irritating conditions affecting infants and young children[8]. The majority of mothers in the present study reported that they gave antifungal drugs or oral gels in the management of children's stomatitis and small percent of them mentioned that they gave traditional prescription such as Tahini and gentian violet. These results could be explained in the light of the fact that stomatitis can be properly treated with application of fungicide as well as it prevent spread of the disease or prolongation of its course. While, Gentian violet solution from many mothers' perspectives is considered harmful and may be irritating to the oral mucosa additionally it easily stains clothing[8].

The results of the current study are consistent with the findings of Garcia- Cuesta (2014)[50]who mentioned that oral candidiasis is best managed by oral antifungal drugs. Tarçın (2011)[51] added that the treatment of mild, localized oral candidiasis usually consists of topical antifungal therapy such as Nystatin oral suspensions. Pappas et al. (2016)[24] also supported that oral candidiasis is usually treated with antifungal medicine.

Globally, the results of the current study revealed that nearly half of mothers obtained good total score of practices and approximately equal percent had unsatisfactory total score. Mothers' good practices could be related to high educational level of some mothers and their residence. Highly educated mothers and those lived in urban areas are suspected to be coming from higher or middle socio-economic levels. They usually tended to be knowledgeable and updated regarding the management of the health problems affecting their children. In addition they usually receive information from educated and knowledgeable persons. Conversely, mothers who obtained unsatisfactory score could be related to lack of knowledge and limited educational level. Lack of health educational programs in mass media that improve mothers' awareness regarding management of the children's common gastrointestinal problems may be another reason for poor practices of these mothers. Finally, the current study shedding some light on the necessity of improving mothers' practices in management of common gastrointestinal problems of their young children .

V. Conclusion

The findings of the current study reflect that mothers have either good or poor practices regarding the management of common gastrointestinal problems affecting their young children.

VI. Recommendations

The main recommendations of this study are:

1. Educational sessions should be provided for mothers in pediatric hospitals where the pediatric nurses should play a vital role in educating the mothers regarding management of their children problems.
2. Pediatric hospitals should provide mothers of young children with materials such as handouts, brochures or simple books about management of common gastrointestinal problems which serve as reminders for mothers as they manage their children.
3. Mass media should raise the awareness of mothers about common health problems that affect children under five years. Emphasize should be directed toward proper management of such problems at home.
4. A hot- line telephone concerned with answering mothers questions about health problems of their young children should be established and advertised through all mass media.
5. Mother classes about management of common health problems of young children should be held whether in outpatient or inpatient pediatric settings.

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Table (1): Characteristics of Mothers (n=100).

Mothers' characteristics	(n=100)	
	No.	%
Age in year		
• <30 years	58	58
• 30 years and more	42	42
Min-Max	16-42	
Mean±SD	27.4±4.9	
Level of education		
• Illiterate	10	10
• Primary education	9	9
• Preparatory education	11	11
• Secondary education	29	29
• University education	41	41
Residence		
• Rural	45	45
• Urban	55	55
Number of children		
• 1-2	72	72
• 3 or more	28	28
Min-Max	1-5	
Mean±SD	2.0±0.9	

Table (2): Mothers' Practices Regarding Management of Diarrhea in their young children:

Practices regarding diarrhea management	(n=100)	
	No.	%
Mothers' initial response regarding children's diarrhea		
• Consult the pediatrician immediately as the child gets ill	56	56
• Ask the pharmacist advice	14	14
• Administer previously prescribed medication	30	30
Self-administered medication in case of diarrhea (n=30)		
• Intestinal antiseptic (Nifuroxazide: antinal)	21	70
• Smecta	8	26.6
• Antibiotic	1	3.4
Stopping feeding (Regular diet/breast feeding/ formula):		
• Yes	10	10
• No	90	90
Giving extra fluids		
• Yes	68	68
• No	32	32
Type of extra fluids given during diarrheal attack : n=68		
• Tea with lemon	21	30.9
• Beverage (7- Up)	14	20.6
• Rice water	12	17.4
• Water with sugar	8	11.8
• Fruit juice	7	10.3
• Others	6	8.8
Giving ORS packets :		
• Yes	81	81
• No	19	19
Giving Zinc supplements :		
• Yes	33	33
• No	67	67

Table (3): Mothers' Practices regarding Management of Constipation in their young children:

Management of constipation	(n=100)	
	No.	%
# Management of constipation		
• Using suppositories	70	70
• Increase oral fluid intake (e.g. natural laxative fluids such as fenugreek, anise and senna herb).	49	49
• Adding fruits/vegetables to the child's meal	39	39
• Performing anal stimulation	26	26
• Establishing regular pattern of children's defecation.	14	14
• Performing enema	3	3
Person who prescribe suppositories (n=70)		
• Pediatrician	35	50
• Pharmacist	6	8.6
• Mother herself (Self medication)	29	41.4

#Categories are not mutually exclusive

Table (4): Mothers' Practices Regarding Management of Vomiting in their Young Children

Management of vomiting	(n=100)	
	No.	%
Management of vomiting		
• Administering Antiemetic	76	76
• Stopping feeding to reduce frequency of vomiting	17	17
• Take no action and just observe the child	7	7
Person who prescribe antiemetic(N=76)		
• Pediatrician	59	77.6
• Pharmacist	17	22.4

Table (5): Mothers' Practices Regarding Management of Colic in their young children

Management of colic	(n=100)	
	No.	%
#Management of colic		
• Giving antispasmodic drugs	62	62
• Giving warm fluids	49	49
• Placing the child in prone position to alleviate gases	29	29
• Performing back message in prone position	14	14
Person who prescribe antispasmodics (n=62)		
• Pediatrician	39	62.9
• Pharmacist	5	8
• Mother herself (Self medication)	18	29.1

#Categories are not mutually exclusive

Table (6): Mothers' Practices Regarding Management of Thrush Stomatitis in their Young Children

Management of stomatitis	(n=84)	
	No.	%
Management of thrush stomatitis (n=84)		
• Giving antifungal drugs /oral gel	70	83.3
• Giving traditional prescription such as Tahini	9	10.7
• Applying gentian violet	5	6
Person who prescribe treatment of thrush stomatitis (n =70)		
• Pediatrician		
• Pharmacist	24	34.3
• Mother herself (Self medication)	5	7.1
	41	58.6

Table (7): Mothers' Total Percent Scores of Practices Regarding Management of Common Gastrointestinal Problems in their Young Children

Score of Practice	Mothers 'score of practice (n=100)			
	No.	%	Min-Max	Mean±SD
Good	49	49	14.0-92.0	66.8±8.5
Satisfactory	4	4		
Unsatisfactory	47	47		

Unsatisfactory <50% Satisfactory > 50 %< 65% Good> 65%

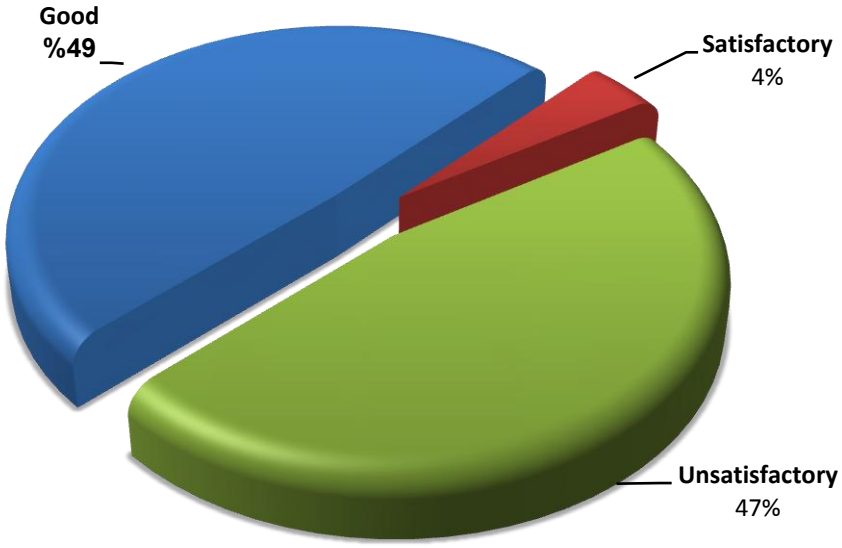

Figure (1): Mothers' Total Percent Scores of Practices Regarding Management of Common Gastrointestinal Problems in their Young Children.

Omnia Galal Waziry."Mothers'Practices Regarding Management of Common Gastrointestinal Problems Affecting Their Young Children."IOSR Journal of Nursing and Health Science (IOSR-JNHS), vol. 7, no.06 , 2018, pp. 54-64.