

QUALITY OF LIFE OF CHILDREN UNDER FIVE YEARS OLD WITH GASTROINTESTINAL PROBLEMS IN HOLY KARBALA CITY

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Abstract

Gastrointestinal Problems (GIP) are immune-mediated gastrointestinal disorders characterized by chronic gastrointestinal inflammation and have a genetic component. Despite the fact that individuals with these conditions have a normal life expectancy, the need for ongoing treatment, recurring hospitalizations, operations, and the infection's relapsing environment have a major detrimental impact on their quality of life (QOL). The goal of this study was to assess Quality of life of children under five years old with gastrointestinal problems and to find out the relationship between Quality of life of children under five years old with gastrointestinal problems and mother demographic data.

This study was a cross-sectional study conducted at Al-Zahrawi University College of Nursing Department of Karbala Teaching Hospital for Children from the date of January 10 to April 25, 2021. Children who were diagnosed with gastrointestinal problems, and who were followed up as out patients or during hospitalization, shared their mothers in answering the questions Research questionnaires, after obtaining approval from them. The evaluation was done by a special questionnaire. 302 mothers participated aged less than 20-40 years. The data were examined using descriptive statistics such as frequency and percentage, as well as inferential statistical processes such as correlation coefficient.

The study reveals 302 mothers aged less than 20-40 years participated. Mothers under the age of 20 were the most involved, with a percentage of 47.7; most of the participants were housewives, with a percentage of 42.4; they were the most involved in the level of mothers' education, with a percentage of institution and college graduates, with a percentage of 31.1; and they were the most involved in the area of residence, with a percentage of 31.1; and they were the most involved in the area of residence, with a percentage of 31.1; and they were the The percentage of children living in urban areas was 62.9 percent, while the type of child was Bottle feeding accounted for 55.0 percent of the total, while breastfeeding for 12 months accounted for 42.4 percent. The percentage of children with gastrointestinal infections was more than among children who were bottle feeding was 61%. The results of the study indicated that there is a high significant relationship between the level of the mother's culture and the child's infection with gastrointestinal infections, and there is no relationship between the child's infections with gastrointestinal infections and the mother's age or occupation, and a high significant relationship between bottle feeding and gastrointestinal infections in children. The study recommended to encouraging mothers to breastfeed their children and taking good care of hygiene with washing hands in case the hero bottle feeding every time .

Key words: "Quality of life; Gastrointestinal Problems; quality of life; children"

INTRODUCTION

Gastrointestinal Problems (GIP) are immune-mediated gastrointestinal disorders characterized by chronic gastrointestinal inflammation and have a genetic component. Despite the fact that individuals with these conditions have a normal life expectancy, the need for ongoing treatment, recurring hospitalizations, operations, and the infection's relapsing environment have a major detrimental impact on their quality of life (QOL). The word QOL refers to a patient's personal perception of their health and the influence of their disease on their physical, social, and emotional well-being [1].

There has been a lot of study done on this topic, and the vast bulk of it backs up the assumption that people with those with gastrointestinal disorders have a lower quality of life than the general population.

The majority of scientists agree that disease activity is the most important predictor of quality of life in patients with gastrointestinal problems; however, it is still unclear how other disease manifestations, such as disease duration, recurrent hospitalizations, or different treatment modalities, affect their quality of life. We aimed to determine how illness factors affect quality of life in Iraqi pediatric patients with gastrointestinal problems in this study[3].

Gastrointestinal problems are a frequent health issue around the world. It usually affects the stomach or intestines, and diarrhea is the most common symptom. The majority of gastrointestinal issues are minor and go away on their own after a few days. Diarrheal diseases, on the other hand, are associated with a high rate of morbidity and mortality in certain groups. Dehydration can be severe in older adults, young children, and persons with long-term illnesses or a weakened immune system, necessitating medical attention [4].

The gastrointestinal system can be infected by a variety of bacteria, viruses, and parasites. Differentiating between different etiologies is difficult because the signs are similar. The bacteria that cause gastrointestinal disorders differ depending on geographical location, economic development, health, and hygienic standards. Food poisoning is a common cause of diarrhea epidemics in wealthy countries like the United States. *Bacillus cereus*, *Campylobacter*, *Salmonella*, and *Escherichia coli* are among the bacteria that cause gastrointestinal infections and are usually acquired by eating underdone food [5-6].

Viruses that are extremely contagious, such as norovirus, can cause gastroenteritis and foodborne disease epidemics. Digestive viruses are relatively stable in the environment and spread quickly by personal or internal contact, primarily in closed communities like hospitals, dormitories, day care centers, and cruise ships[7-8].

Ingestion of contaminated food or water is the most common source of digestive parasite toxicity. Hikers who drink untreated stream water are frequently plagued with *Giardia labile* parasites. *Cryptosporidium* has been linked to water used for drinking or pleasure. Ingestion of contaminated food or water has been linked to epidemics of *Cyclospora* and *Cystoisospora* (previously *Isospora*). Tropical and subtropical parts of the world have more of these parasites [9-10].

Tummy troubles can be quite serious at times. According to the National Institute of Diabetes and Digestive and Kidney Diseases, gastrointestinal problems affect 60 million to 70 million Americans, resulting in about 250,000 deaths per year. According to the NDDK, these illnesses account for about 50 million hospital visits and 21.7 million hospital admissions per year. Furthermore, treating and maintaining digestive illnesses comes at a huge cost to the US healthcare system of more than \$141.8 billion [13].

"Unfortunately, there are many different gastrointestinal problems, so it is easy to mistakenly neglect them. Some gastrointestinal difficulties are mild and usually go away on their own, but some conditions are thoughtful enough that you have to see a physician or gastroenterologist" [15].

Materials and Methods

This was a cross-sectional study conducted at Al-Zahrawi University College of Nursing Department of Karbala Teaching Hospital for Children from the date of January 10 to April 25, 2021. Children who were diagnosed with gastroenteritis, and who were followed up as outpatients or during hospitalization, shared their mothers in answering the questions Research questionnaire, after obtaining approval from them. The evaluation was done by a special questionnaire. 100 mothers participated aged less than 20-40 years. The data were analyzed through the application of descriptive statistic frequency, percentage, and the application of inferential statistical procedures, which include correlation coefficient. Candidates for inclusion were children diagnosed with gastrointestinal problems according to the revised Porto criteria [4], who were hospitalized or followed in the outpatient IBD clinic. All patients had undergone at least one full ileocolonoscopy with biopsies, esophago-gastro-duodenoscopy with biopsies and magnetic resonance enterography for small bowel assessment.

A number of factors were recorded at the time of the evaluation: demographic information, illness activity, disease duration, current treatment, and the number of hospitalizations in the previous three months. The Pediatric Crohn's disease activity index (PCDAI)[11] or the Pediatric Ulcerative Colitis activity index (PUCAI)[12] were used to assess

disease activity. The PCDAI score goes from 0 to 100 points, while the PUCAI score runs from 0 to 85. Patients were characterized as being in remission (PCDAI 10 or PUCAI 10), in relapse with mild activity (10 PCDAI 30 or 10 PUCAI 34), or in degeneration with moderate/severe activity based on the activity indices (PCDAI > 30 or PUCAI > 34). At the time of the evaluation, the physician's global value was also recorded. On a four-point scale, a physician's global valuation is a validated tool that allows them to assess disease activity clinically (inactive, mild, moderate and severe disease).

The IMPACT-III questionnaire, a 35-item self-report measure for evaluating quality of life in children and adolescents with Gastrointestinal Problems, was used to assess quality of life. Children rate how upset they are by specific features of their health condition on a 5-point Likert scale. Bowel symptoms, systemic symptoms, emotional functioning, social functioning, body image, and treatment/interventions were amongst the six subscales.

Results

Table (1) distribution of the study sample socio demographic characteristics

| Variables | | F | % |
|--------------------------------|----------------------------------|-----|-------|
| Mothers age | Less than 20 | 144 | 47.7 |
| | 21-25 | 32 | 10.6 |
| | 26-30 | 79 | 26.2 |
| | 31-35 | 15 | 5 |
| | 36-40 | 32 | 10.6 |
| | Total | 302 | 100 |
| Fathers age | 20-25 | 160 | 53.0 |
| | 26-30 | 48 | 15.9 |
| | 31-35 | 62 | 20.5 |
| | 36-40 | 16 | 5.3 |
| | 41 and above | 16 | 5.3 |
| | Total | 302 | 100.0 |
| Occupation of mothers | Employment | 94 | 31.1 |
| | House wife | 128 | 42.4 |
| | Unemployed | 80 | 26.5 |
| | Total | 302 | 100.0 |
| Occupation of fathers | Employment | 159 | 52.6 |
| | Unemployed | 143 | 47.4 |
| | Total | 302 | 100.0 |
| Mothers education level | Institution and College graduate | 94 | 31.1 |

| | | | |
|-------------------------------------------|----------------------------------|-----|-------|
| | Intermediate school graduate | 64 | 21.2 |
| | Primary school graduate | 80 | 26.5 |
| | Unable to read and write | 64 | 21.2 |
| | Total | 302 | 100.0 |
| Fathers education level | Institution and College graduate | 94 | 31.1 |
| | Intermediate school graduate | 64 | 21.2 |
| | Primary school graduate | 48 | 15.9 |
| | Secondary school graduate | 64 | 21.2 |
| | Unable to read and write | 32 | 10.6 |
| | Total | 302 | 100.0 |
| Residency area | Rural | 112 | 37.1 |
| | Urban | 190 | 62.9 |
| | Total | 302 | 100.0 |
| No. of children in the family | 1 | 96 | 31.8 |
| | 2 | 79 | 26.2 |
| | 3 | 79 | 26.2 |
| | 4 | 32 | 10.6 |
| | 5 | 16 | 5.3 |
| | Total | 302 | 100.0 |
| The type of child's feeding | Bottle | 142 | 55.0 |
| | Breast | 160 | 45.0 |
| | Total | 302 | 100.0 |
| Breast feeding should continue for | 12 months | 128 | 42.4 |
| | 2years | 126 | 41.7 |
| | Don't know | 48 | 15.9 |
| | Total | 302 | 100.0 |

Table (2) Preparing the formula do you sterilized bottles in each feeding by?

| Items | | f | % |
|--------------------------------------------------------------------|------------------|-----|-------|
| a) Washing the bottle with soap, water and special brush. | Never | 32 | 10.6 |
| | Some of the time | 96 | 31.8 |
| | Most of the time | 79 | 26.2 |
| | All of the time | 95 | 31.5 |
| | Total | 302 | 100.0 |
| b) Washing with boiled water . | Never | 32 | 10.6 |
| | Some of the time | 96 | 31.8 |
| | Most of the time | 96 | 31.8 |
| | All of the time | 78 | 25.8 |
| | Total | 302 | 100.0 |
| c) Washing with boiled water and salt. | Never | 48 | 15.9 |
| | Some of the time | 80 | 26.5 |
| | Most of the time | 95 | 31.5 |
| | All of the time | 79 | 26.2 |
| | Total | 302 | 100.0 |
| d) Boiling the bottle in boiled water in a pan for 15 -20 minutes. | Never | 48 | 15.9 |
| | Some of the time | 80 | 26.5 |
| | Most of the time | 110 | 36.4 |
| | All of the time | 64 | 21.2 |
| | Total | 302 | 100.0 |
| e) Boiling the cover for 5 minutes. | Never | 64 | 21.2 |
| | Some of the time | 64 | 21.2 |
| | Most of the time | 80 | 26.5 |
| | All of the time | 94 | 31.1 |
| | Total | 302 | 100.0 |

Table (3) How often did you clean your hands in each of the following ways before preparing formula

| Items | | f | % |
|------------------------------------------------------|------------------|-----|-------|
| a)Rinsed my hands with water only | 0 | 64 | 21.2 |
| | All of the time | 80 | 26.5 |
| | Most of the time | 16 | 5.3 |
| | Some of the time | 47 | 15.6 |
| | Never | 95 | 31.5 |
| | Total | 302 | 100.0 |
| b)Wiped my hands only | 0 | 80 | 26.5 |
| | All of the time | 80 | 26.5 |
| | Some of the time | 80 | 26.5 |
| | Never | 62 | 20.5 |
| | Total | 302 | 100.0 |
| c)Washed with soap | 0 | 64 | 21.2 |
| | Never | 80 | 26.5 |
| | Some of the time | 16 | 5.3 |
| | Most of the time | 47 | 15.6 |
| | All of the time | 95 | 31.5 |
| | Total | 302 | 100.0 |
| d)Used hand sanitizer (such as gel or wipes) | 0 | 80 | 26.5 |
| | Never | 80 | 26.5 |
| | Most of the time | 80 | 26.5 |
| | All of the time | 62 | 20.5 |
| | Total | 302 | 100.0 |
| e)Prepared formula without cleaning my hands | 0 | 64 | 21.2 |
| | All of the time | 80 | 26.5 |
| | Most of the time | 16 | 5.3 |
| | Some of the time | 47 | 15.6 |

| | | |
|-------|-----|-------|
| Never | 95 | 31.5 |
| Total | 302 | 100.0 |

Table (4) Gastrointestinal symptoms

| Items | | f | % |
|----------------------------------------------|---------------|-----|-------|
| 1. Pain in his/her abdomen or stomach | Never | 64 | 21.2 |
| | Almost never | 80 | 26.5 |
| | Sometimes | 16 | 5.3 |
| | Often | 47 | 15.6 |
| | Almost always | 95 | 31.5 |
| | Total | 302 | 100.0 |
| 2. Diarrhea | Never | 80 | 26.5 |
| | Almost never | 80 | 26.5 |
| | Often | 80 | 26.5 |
| | Almost always | 62 | 20.5 |
| | Total | 302 | 100.0 |
| 3. Constipation | Never | 64 | 21.2 |
| | Almost never | 80 | 26.5 |
| | Sometimes | 16 | 5.3 |
| | Often | 47 | 15.6 |
| | Almost always | 95 | 31.5 |
| | Total | 302 | 100.0 |
| 4. Nausea | Never | 80 | 26.5 |
| | Almost never | 80 | 26.5 |
| | Often | 80 | 26.5 |
| | Almost always | 62 | 20.5 |
| | Total | 302 | 100.0 |
| 5. Vomiting | Never | 64 | 21.2 |

| | | | |
|----------------------------------------------------|---------------|-----|-------|
| | Almost never | 80 | 26.5 |
| | Sometimes | 16 | 5.3 |
| | Often | 47 | 15.6 |
| | Almost always | 95 | 31.5 |
| | Total | 302 | 100.0 |
| 6. Discomfort in his/her abdomen or stomach | Never | 64 | 21.2 |
| | Almost never | 80 | 26.5 |
| | Sometimes | 16 | 5.3 |
| | Often | 47 | 15.6 |
| | Almost always | 95 | 31.5 |
| | Total | 302 | 100.0 |

Cont. table (4)

| Items | | f | % |
|------------------------------|---------------|-----|-------|
| 7. Passing gas | Never | 80 | 26.5 |
| | Almost never | 80 | 26.5 |
| | Often | 80 | 26.5 |
| | Almost always | 62 | 20.5 |
| | Total | 302 | 100.0 |
| 8. Not feeling hungry | Never | 64 | 21.2 |
| | Almost never | 80 | 26.5 |
| | Sometimes | 16 | 5.3 |
| | Often | 47 | 15.6 |
| | Almost always | 95 | 31.5 |
| | Total | 302 | 100.0 |
| 9. Bloating | Never | 80 | 26.5 |
| | Almost never | 80 | 26.5 |
| | Often | 80 | 26.5 |
| | Almost always | 62 | 20.5 |
| | Total | 302 | 100.0 |

Table (5) Relationship between Quality of life of children under five years old with gastrointestinal problems and mother demographic data

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|----------------------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | 3.244 | .552 | - | 5.876 | .000 |
| Mother's age | .009 | .015 | .039 | .593 | .554 |
| Occupation of mother | .124 | .127 | .062 | .978 | .329 |
| Mother's education level | -.717 | .101 | -.536 | -7.069 | .000 |
| a. Dependent Variable: QoL | | | | | |

Discussion Table (1) distribution of the study sample socio demographic characteristics

The first table's findings revealed that mothers under the age of 20 have the highest average age, 47.7 , and that housewives have the highest percentage of jobs for mothers of children with Gastrointestinal Problems, 42.4, and that mothers of children with Gastrointestinal Problems have the highest percentage of cultural level, 42.4. and also revealed that mothers of children with Gastrointestinal Problems have the highest percentage of cultural level, and the city's population has the highest percentage of infected children with a percentage of 62.9, and the highest percentage of infected children is found in families with one child with a percentage of 31. And children who were bottle fed made up the biggest number of youngsters with gastrointestinal problems.

Table (2) Preparing the formula do you sterilized bottles in each feeding

The results in this table are that the steps are somewhat similar when preparing the formula, sterilize the bottles at each feeding.

Table (3) “How often did you clean your hands in each of the following ways before preparing formula”

The results in this table show that most mothers do not properly clean the milk bottle, that most mothers only wash the bottle with water, that few mothers wash the milk bottle with soap and water before and after each feeding, and that very few mothers clean the bottle with special sterilizers before and after each feeding. Breastfeeding is common, and most mothers do not wash their hands before making milk for their children.

Table (4) Gastrointestinal symptoms

The results showed that most of the children who participated in the research were suffering from most of these symptoms (pain in his stomach or abdomen, diarrhea, constipation, nausea, vomiting, discomfort in his stomach or stomach, passing gas, not feeling hungry, and bloating) and the percentages of these were Symptoms are similar in most children

Table (5) Relationship between Quality of life of children under five years old with gastrointestinal problems and mother demographic data

Table (5) shows that there is a high significant relationship Quality of life of children under five years old with gastrointestinal problems and Mother's education level, while there is no significant relationship between Quality of life of children under five years old with gastrointestinal problems and Mother's age -Occupation of mother (at p-value ≤ 0.05).

Conclusions

302 mothers under 20-40 years of age participated. The following mothers under the age of 20 were the most involved, with a percentage of 47.7, most of the participants were housewives with a percentage of 42.4, and they were the most involved in the level of education of mothers with a percentage of institutions. . The number of college graduates was 31.1, the majority of respondents were in the urban housing area, the ratio was 62.9, the type of infant breastfeeding was 55.0, and the duration of breastfeeding for 12 months was 42.4. The proportion of children with GI infections more than those who were bottle-fed was 61%, which indicates a highly significant relationship with the quality of life of children under five years of age with GI problems and the level of education of the mother. To conclude that the cultural level of the mother has an important role in reducing the incidence of Gastrointestinal Problems in children under the age of five.

Recommendations

Based on the previous conclusions, the researcher can recommend the following: Emphasis on breastfeeding for children and urging mothers to avoid infections of the digestive system. Increasing the community's awareness of the risks of gastrointestinal infections. Urging mothers to adhere to sterilizing the milk bottle and washing it with water and soap or salt before and after use. There is a need for more studies to find out the reasons for the spread of infections of the Gastrointestinal Problems in children in the holy city of Karbala.

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