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Parents' knowledge, attitude, and practice towards childhood constipation in Al Baha- Saudi Arabia

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ABSTRACT

Introduction: Constipation is an important pediatric health issue, most childhood constipation (CC) cases are due to functional constipation (FC), rather than being caused by organic causes, occurring as a result of intentional stool with hold. *Methodology:* This is a prospective, cross-sectional, community-based study that was carried out to assess the Knowledge, Attitude, and Practice (KAP) of parents towards childhood constipation. *Results:* It was found that only 3.5% had 'good' knowledge, whereas the majority of the parents (80.5%) had 'poor' knowledge regarding childhood constipation, while only 35.9% (n=204) of the parents had shown good practices related to (CC) with statistically significant association seen with age, educational level, and employment status. *Conclusion:* Parents' level of knowledge and practices towards CC is poor and there is a considerable need to disseminate accessible and reliable information to parents or caretakers for supporting and effectively managing their children's health.

Keywords: Constipation, Functional, parents, knowledge, practice.

1. INTRODUCTION

Constipation is an important pediatric health problem, in developed countries it is responsible for 3% of all visits to pediatric general clinics and about 30% of visits to pediatric gastroenterology clinics (Poddar, 2016). The prevalence of childhood constipation varies largely, from 0.7% to 29.6%, with 16% being the median value (Mohammed Hasosah et al., 2013). Studies reported that constipation affects both sexes equally, and at least 50% of the cases of constipation are reported to occur in the first year of life, although it is more often diagnosed in school-age children (Mario C. Vieira et al., 2016). The peak age for childhood constipation is 2 - 4 years, with the start of toilet training (Xinias and Mavroudi, 2015).

Diagnosis of functional constipation is established by the ROME III criteria as follows: children 4 years or less should have a minimum of two criteria

present one month before diagnosis, while children more than 4 years should have two or more of the following symptoms present for the last two months[a,b]

Two or fewer defecations per week; One or more episodes of fecal incontinence per week; Retentive posturing or stool retention; Hard or painful bowel movements; Presence of a large rectal fecal mass; Large stools diameterwhich may occlude the toilet.

[a]With no objective evidence of a pathological condition.

[b]Without fulfilling the criteria of irritable bowel syndrome (Howarth and Sullivan, 2016; Rasquin et al., 2006).

Functional constipation is responsible for 90% of the cases of constipation in children, while the remaining 5-10% of the cases are attributed to an organic cause (Meyer et al., 2017). These organic causes include colorectal space-occupying lesions, obstruction, stenosis, or inflammatory conditions, it also includes secondary constipation (embolic hemorrhoids, fissure in ano, intestinal masses, CNS disorders (stroke, spinal cord injury), endocrine disorders as (obesity), diabetes, and hypothyroidism, in addition to Hirschsprung disease and spina bifida (Sun et al., 2021; Bongers et al., 2009). Well-known complications of constipation include chronic abdominal pain, incontinence of the feces (soiling), nocturnal enuresis, bleeding per rectum, and predisposition to urinary infection/retention (Mario C. Vieira et al., 2016). More serious sequelae of constipation may include fecal impaction, toxic megacolon, intestinal/ileus obstruction, and perforation of the bowel (Chang et al., 2006).

The North American and European Societies for Pediatric Gastroenterology, Hepatology, and Nutrition published new clinical guidelines for the assessment and management of childhood functional constipation in 2014. These guidelines recommend that management of functional constipation should include ''a normal intake of fluids anddietary fibers, normal physical exercises, and further pharmacological treatment for fecal impacted feces, which should be followed by a maintenance treatment to prevent recurrence (Vandenplas and Devreker, 2019).

2. MATERIALS AND METHODS

This is a prospective, cross-sectional, community-based study that was carried out in the period from Nov 2020 to May 2021 to assess the knowledge, attitude, and Practice (KAP) of parents towards childhood constipation, in Al Baha which is the capital city of Albaha area located in the southwest of Saudi Arabia. An electronic questionnaire was designed in Arabic language covering all the specific objectives of the study then it was distributed electronically to the target population (Parents who have children less than 17 years) who were encouraged to fill the questionnaire after getting their acceptance in the informed consent. After obtaining the minimum target sample size (385) which was calculated using the equation:

$$\frac{\frac{Z^2 \times P(1-P)}{e^2}}{1 + \left[\frac{z^2 \times P(1-P)}{e^2 N}\right]}$$

we included as many eligible participants as possible who agree to participate during the study period (5 months).

Analytical Methods

The data were analyzed using SPSS program version 25 after retranslation of the questionnaire back to English language and coding the variables, data were considered to be statistically significant when P-value ≤ 0.05.

Ethical consideration

Ethical approval of the study proposal from the ethical committee of Faculty of Medicine, Albaha University.

Written consent will be obtained from all respondents before handling the questionnaire.

Ensure the privacy of the participants and use the data only for research legally and ethically.

3. RESULTS

This study aimed to assess the knowledge, attitude, and practices (KAP) of parents regarding childhood constipation in Albaha city in the southern region of Saudi Arabia. We had a total of 574 responses and included 568 who gave consent and completely answered all items in the questionnaire. The Sociodemographic characteristics of the interviewed parents were shown in table (1), which showed that 64.6% were female and 35.4% were male parents. The age distribution showed that 33.3% belonged to the 25-34

year age group, and the level of education revealed 63.2% had university or above educational qualifications. The majority of the respondent (80.8%) were employed, and 17.3% were unemployed (Table 1).

Table 1 Sociodemographic characteristics of participants

		Frequency	Percent
Age	15-24 years	90	15.8
	25-34 years	189	33.3
	35-44 years	172	30.3
	45-60 years	117	20.6
Gender	Female	367	64.6
	Male	201	35.4
Educational level	High school and below	209	36.8
	University and postgraduate	359	63.2
Employment status	Not employed	98	17.3
	Employed	459	80.8
	Retired	11	1.9

The responses of knowledge and practices regarding childhood constipation among parents were converted as correct and incorrect answers given in Table (2). It was found that 258 (45%) had good practices regarding the initial home treatment of constipation in their children, while only 36% (n=205) of the parents had shown good practices related to the management of complicated childhood constipation (fecal impaction). On asking the parents about fiber-rich diets 47.7% choose fruits (Apple, Banana), 43% stated that it is vegetables, 2.8% reported potatoes while 6% think breadand riceare rich in fibers.

Table 2 Responses of the participants

	Items	Responses	
		Wrong	Correct
Knowledge	Definition of constipation	508 (89.4%)	60 (10.6%)
	Is constipation a disease or a symptom?	362 (63.7%)	206 (36.3%)
	Causes of constipation in children	114 (20.1%)	454 (79.9%)
	Causes of functional constipation in children	275 (48.4%)	293 (51.6%)
	common symptoms of constipation	339 (59.7%)	229 (40.3%)
	Does a child with constipation need full investigations at all times?	310 (54.6%)	258 (45.4%)
	Complications of constipation in children	417 (73.4%)	151 (26.6%)
Practices	Initial treatment to do at home to treat your child's constipation before taking him to the doctor.	310 (54.6%)	258 (45.4%)
	Treatment given when the child experiences fecal impaction and obstruction of the intestine.	363 (63.9%)	205 (36.1%)

Based on the total score obtained, participants who gave correct answers were given a score of 1, and those given incorrect answers were given no scores. Total scores were calculated for each participant, and then the knowledge levels were categorized as

good, fair, and poor. The analysis showed that only 3.5% had 'good' knowledge, whereas the majority of the parents (80.5%) had poor knowledge related to childhood constipation (Figure 1).

When assessing the relationship of the knowledge with the age of the parents, those who belong to the 35-44 year age group showed comparatively more 'good' knowledge than others, but there were no statistically significant differences seen across the age groups (*P*-value =0.304). It was found that male parents had shown more 'good' knowledge (6.5%) than females (1.9%), which revealed a statistically significant association (*P*-value =0.010). Even though parents with the educational level of university or above had comparatively demonstrated better knowledge than others,there were no statistically significant differences observed (*P*-value =0.728). The association between knowledge level and employment status was found to bestatistically not significant (*P*-value=0.466) (Table 3).

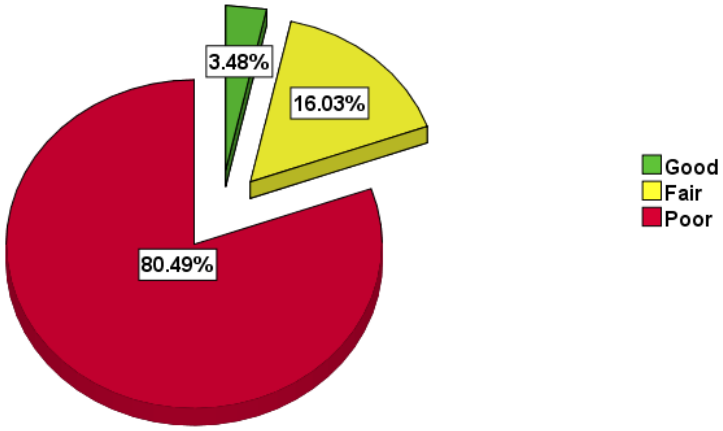

Figure 1 parents level of knowledge

Table 3 Relationship of the knowledge and sociodemographic characteristics participants

			Knowledge			Total	*P*-value*
			Good	Fair	Poor		
Age	15-24 years	N	0	10	80	90	0.304
		%	0.0%	11.1%	88.9%	15.8%	
	25-34 years	N	7	30	152	189	
		%	3.7%	15.9%	80.4%	33.3%	
	35-44 years	N	9	30	133	172	
		%	5.2%	17.4%	77.3%	30.3%	
	45-60 years	N	4	19	94	117	
		%	3.4%	16.2%	80.3%	20.6%	
Gender	Female	N	7	54	306	367	*0.010*
		%	1.9%	14.7%	83.4%	64.6%	
	Male	N	13	35	153	201	
		%	6.5%	17.4%	76.1%	35.4%	
Educational level	High school and below	N	6	31	172	209	0.728
		%	2.9%	14.8%	82.3%	36.8%	
	University and above	N	14	58	287	359	
		%	3.9%	16.2%	79.9%	63.2%	
Employment status	Not employed	N	1	18	79	98	0.466
		%	1.0%	18.4%	80.6%	17.3%	
	Employed	N	19	70	370	459	
		%	4.1%	15.3%	80.6%	80.8%	
	Retired	N	0	1	10	11	

		%	0.0%	9.1%	90.9%	1.9%	

When we assessed the relationship of the practices and sociodemographic characteristics, we found that there was no statistically significant association seen with age (*P*-value =0.098), gender (*P*-value =0.379), educational level (*P*-value =0.991), and employment status (*P*-value =0.408) Table (4).

Table 4 Relationship of the practices and sociodemographic characteristics participants

			Good	Poor	Total	P value*
Age	15-24 years	N	27	63	90	0.098
		%	30.0%	70.0%	15.8%	
	25-34 years	N	59	130	189	
		%	31.2%	68.8%	33.3%	
	35-44 years	N	69	103	172	
		%	40.1%	59.9%	30.3%	
	45-60 years	N	49	68	117	
		%	41.9%	58.1%	20.6%	
Gender	Female	N	127	240	367	0.379
		%	34.6%	65.4%	64.6%	
	Male	N	77	124	201	
		%	38.3%	61.7%	35.4%	
Educational level	High school and below	N	75	134	209	0.991
		%	35.9%	64.1%	36.8%	
	University and above	N	129	230	359	
		%	35.9%	64.1%	63.2%	
Employment status	Not employed	N	30	68	98	0.408
		%	30.6%	69.4%	17.3%	
	Employed	N	169	290	459	
		%	36.8%	63.2%	80.8%	
	Retired	N	5	6	11	
		%	45.5%	54.5%	1.9%	

When we assessed the relationship of knowledge level with practices related to childhood constipation (CC), the majority of the parents who had good knowledge had demonstrated good practices related to CC (65%), and similarly who had poor knowledge had poor practices (67.1%), which showed a statistically significant association (*P*-value =0.002) (Table 5).

Table 5 Relationship of knowledge and practices

			Practices		Total	*P*-value*
			Good	Poor		
Knowledge	Good	N	13	7	20	0.002
		%	65.0%	35.0%	3.5%	
	Fair	N	40	49	89	
		%	44.9%	55.1%	15.7%	
	Poor	N	151	308	459	
		%	32.9%	67.1%	80.8%	

When we asked the parents about what worries them about chronic constipation in their children, 38% of them feared that constipation will continue with the child until the child grows up', 36.5% feared that constipation might be due to a congenital defect in the colon (narrowing) and 25.5% feared that the cause of constipation is a tumor in the abdomen. The analysis of the source of information related to constipation showed that the most common source was internet (32.4%), followed by information from friends and family (25%), frequent management of CC (19.%), and 16.7% had it from doctors and/or medical staff (Figure 2).

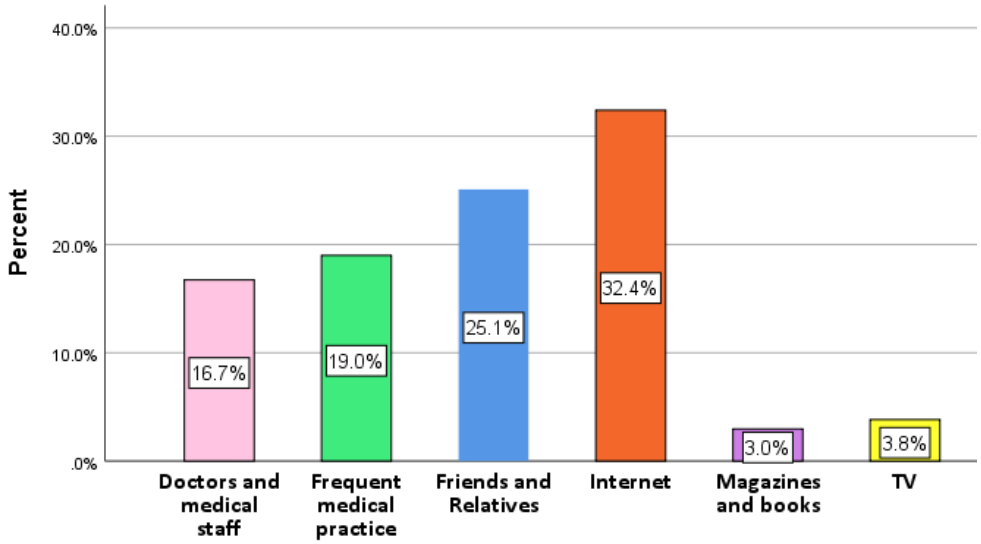

Figure 2 Participants source of information about constipation

4. DISCUSSION

Understanding the current level of knowledge and practices among parents regarding CC is crucial for the planning of support educational programs. Thus, this study assessed the knowledge, and practices related to CC among parents in Albaha, KSA. The findings of our study showed that the knowledge related to CC among our participants was not satisfactory. It was found that approximately one-tenth of the parents knew the correct definition of childhood constipation. Our study findings showed that there was a lack of information and a cloud of confusion among parents regarding the symptoms of CC. Sometimes parents with no proper knowledge of the mechanism of FC may think that the child intentionally does it. Parents or caretakers need to be made aware of the mechanism of functional constipation and the reason for the loss of control over defecation to remove these negative attributes.

This study showed that a very small proportion of the parents had 'good' knowledge, whereas the majority of them had poor knowledge related to childhood constipation this is consistent with the finding of (Thompson et al., 2021). It also shows that there is a statistically significant link between good knowledge and good practices (*P*-value = 0.002) this is consistent with a study carried out by Aziz who found that there was a strong and significant correlation between parents' knowledge and the children's practice of toilet training (Aziz et al., 2019). Approximately only one-third of the parents had demonstrated good practices related to CC concerning the management of complicated constipation, while 45% showed good practices towards initial home management of constipation and this could be related to poor knowledge regarding the causes and management of the condition. Thus the education of parents and caretakers is crucial in the management of CC. Education should also be given to the child if he or she is old enough to understand the causes and the need for its management.

This study poses some limitations. Firstly, we didn't ask the parent whether their children suffered from CC, and thus we couldn't establish a relationship between parental experiences in managing CC and their knowledge level. Secondly, the usage of an online self-reported questionnaire may have called for social desirability bias and/or recall bias. Parents of children with chronic constipation are often burdened with onerous and long-term management regimens. There is a need to disseminate accessible and reliable information to parents or caretakers for supporting and effectively managing their children's health.

5. CONCLUSION

Our study showed that the knowledge related to childhood constipation among our participants was not satisfactory. This lack of Knowledge was reflected as poor practice when dealing with childhood constipation as our study shows that there is a statistically significant link between good knowledge and good practices (P-value = 0.002). There is a need to disseminate accessible and reliable information to parents or caretakers for supporting and effectively dealing with their children's constipation.

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Authors´ contribution to the research

Elfatih Mirghani Mohammed Salih: (The principal author) preparation and finalization of the proposal and questionnaire, Writing the final article, Finalization of the manuscript.

Jameel Alghamdi: Contribute to writing the article.

Abdullah Faisal Al Muaibid: Participate in writing the proposal and questionnaire, collection of the data, Data entry and analysis, assisted in writing the article.

Anwar Abdullah Alghamdi: Participate in writing the proposal and questionnaire, collection of the data, entering and analysis of the data.

All authors read and approved the final manuscript.

Ethical Approval

This study was approved by the ethical committee faculty of medicine Albaha University under the approval code No. : REC/PEA/BU-FM/2019/0066.

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Conflict of interests

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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