

## Knowledge assessment for nurses and medical staff regarding incidence of cystic fibrosis

Wasfi Dhahir Abid Ali \*, luay abdulwahid shihab, Suradeq haider Ayez and Seeham Awaed Zuied

*Department of basic sciences, College of nursing, University of Basrah, Iraq.*

World Journal of Advanced Research and Reviews, 2023, 18(03), 1137-1141

Publication history: Received on 09 May 2023; revised on 19 June 2023; accepted on 21 June 2023

Article DOI: <https://doi.org/10.30574/wjarr.2023.18.3.1188>

### Abstract

The recent study conducted in Basrah city aimed to assess the nurses knowledge regarding fibrosis cyst. assessment questionnaire used to reach the aims and include demographic and scientific information. Data statistically analysed for percentage and mean of score. The results showed that female nurses were more 67% more than male, regarding educational level most nurses participated the questionnaire have BSc degree(51.9%) and 52.36% of them have less than one year of experience (35%). Of participants On other hand the knowledge of participants were showed significant mean of score with some insignificant items corresponding the knowledge related to clinical signs. 50% of the participants' answers were significant, regarding knowledge of the disease in terms of symptoms and clinical signs The same percentage was not significant regarding knowledge of information related to the history of the disease case. According to the results, Increasing nurses' knowledge of information related to the disease through curricula and educating the importance of the disease through publications were recommended.

**Keywords:** Cystic fibrosis; Nurses. Assessment; Medical staff

### 1. Introduction

Cystic fibrosis as a life-limiting, recessive disease caused by mutations in the cystic fibrosis trans membrane conductance regulator (CFTR) gene [1]. Cystic fibrosis (usually called CF) is an inherited\* disease. It causes certain glands in the body to not work properly. These glands are called the exocrine (outward-secreting) glands. Exocrine glands normally make thin, slippery secretions including sweat, mucus, tears, saliva and digestive juices.. The typical measure of lung function is forced expiratory volume in 1 second (FEV1). FEV1 is a key predictor of life expectancy in people with cystic fibrosis, and optimising lung function is a major goal of care. Symptoms often appear in infancy and childhood, such as bowel obstruction due to meconium ileus in new born babies. [2]. CF is caused by a mutation in the gene cystic [3,4]. Mutations may also lead to fewer copies of the CFTR protein being produced [5]. This mutation accounts for two-thirds (66-70% [20]) of CF cases worldwide and 90% of cases in the United States; however, over 1500 other mutations can produce CF [6]. About one in 46 Hispanic Americans, one in 65 African Americans, and one in 90 Asian Americans carry a mutation of the CF gene. [7]. There is no known cure for cystic fibrosis. [8].

Cystic fibrosis is the most common life-limiting autosomal recessive disease among people of European heritage [9]. In the United States, about 30,000 individuals have CF; most are diagnosed by six months of age. In Canada, about 4,000 people have CF [10]. Around 1 in 25 people of European descent, and one in 30 of white Americans, [11]. March 2010. is a carrier of a CF mutation. Although CF is less common in these groups, roughly one in 46 Hispanics, one in 65 Africans, and one in 90 Asians carry at least one abnormal CFTR gene. Ireland has the world's highest prevalence of CF, at one in 1353 [12]. Their role complements that of parents. During school hours, school teachers are actually the first-

\* Corresponding author: Wasfi Dhahir Abid Ali.

respondent in cases of disasters or emergencies. They must be able to deal properly with health emergencies both in normal children, and those children with special health care needs [20].

## 2. Material and methods

Fifty nurses (male and female in Basra hospitals). Participated assessment questionnaire designed to assessment nurses knowledge about fibrosis cysts. comprised of questions taken by written. Before Introduction this items distributed for teachers of college. It divided in two Main parts, the socio- demographic characteristic questions concerning with fibrosis cysts. Data collected and statistically data analysis to obtained Frequency. Percentage and Mean of score

## 3. Results and discussion

Cystic fibrosis associated with a shortened life span and impaired quality of life and requires lifelong medical care, as well as extensive support from relatives and friends, which may interfere with the normal daily life of both affected individuals and their relatives.

To investigated the nurses' knowledge's concerning fibrocystic disease after introducing them to the disease through a publication that included brief scientific information for this disease. The results showed after participating in the paper and electronic questionnaire. The demographic axis Table (1).

**Table 1** The frequencies and percentage of demographic information Assessment of the knowledge of nursing staff regarding fibrocystic cysts in Basra Center hospitals

		F	%
gender	male	75	32
	Female	159	67.9
Educational level	diploma	101	44.4
	BSc	118	51.9
	MSc.	4	1.7
	Ph.D	4	1.7
Years of Experience	1>	82	35.1
	1-5	65	27.8
	6-10	31	13.3
	11.15	19	8.1
	15 more	36	15.4
Workplace	Emergency	47	20
	esoteric	28	12.01
	surgery	36	15.4
	Other	122	52.36

The table showed that female nurses were more 67% more than male, regarding educational level most nurses participated the questionnaire have BSc degree(51.9%) and 52.36% of them have less than one year of experience (35%).Cystic fibrosis (usually called CF) is an inherited[13]. Regarding symptoms, questions 6, 8, 9, 11 and 12 table 1 were not statistically significant, which is considered as one of the clinical diagnostic indicators, like Poor growth and poor weight gain despite normal food intake, [14].Accumulation of thick, sticky mucus) [15]. Mental health among people with any chronic illness, including cystic fibrosis, remains an important part of maintaining long-term health and quality of life[16].

**Table 2** Frequencies , percentage and mean of score to assess questionnaire regarding Assessment of the knowledge of nursing staff regarding fibrocystic cysts

NO.	Questions	yes		NO		MS	S
		f	%	f	%		
1	Is cystic fibrosis a chronic genetic disorder?	130	5.7	03	4.2	1.5	s
2	Does cystic fibrosis require daily care?	187	9.5	48	0.4	79	S
3	Is infertility is a symptom of cystic fibrosis?	157	6.8	78	3.1	66	S
4	Does it affect the lungs only?	124	2.9	10	47	52	S
5	Does a fibrous cyst make it difficult to breathe?	173	5.8	55	4.1	75	s
6	Does it cause a bad smell in the mouth?	95	40	37	59	1.4	S
7	Is bowel obstruction one of the symptoms of cystic fibrosis?.	153	4.8	83	5.1	64	S
8	Does it cause chronic constipation?	88	7.2	48	2.7	37	S
9	Do people with this disease suffer from weakness in gaining weight and height?	71	31	58	8.8	31	S
10	Is the disease causing mental health problems?	66	8.3	67	1.6	28	NS
11	Is chronic sinus infection related to cystic fibrosis?	121	53	07	6.9	53	S
12	Does cystic fibrosis cause reduced fertility in women?	83	5.4	51	4.5	35	S
13	Do infected people only live beyond their 40s?	28	9.4	31	0.5	49	S
14	Genetic tests are the main solution to ? avoid infection or early detection	91	5.6	32	3.7	1.85	S
15	Is the appropriate treatment is transplantation of the affected organ (lung)?	37	57	03	4.9	57	S
16	Does it require surgical intervention for the injured in some cases?	78	7.2	26	2.7	87	S
17	Is treatment limited only to antibiotics?	49	1.3	80	8.6	21	S
18	Is the proportion of salts less in the ? injured	116	49.7	117	50.2	49	NS

The results in Table (2) showed that the nurses had great and very good knowledge in general, especially about scientific knowledge in Q16 and Q14 were,(85.6%\_87.2 %)•while it was good in questions Q/2 and Q5 were (79.5%\_75.8%) and medium in Q/3 and Q7 were (66.8%\_64.8%) While they have less knowledge of the remaining questions. Where Q/1, Q/4 and Q/15 occurred between (52.9%\_57%), while Q/6, Q/13 and Q/18 occurred between (49.7\_40.7%), Q/8 and Q/9 occurred Q/12 was between (31%\_37.2%), and Q/13, Q/6, and Q/18 got between (40%\_49%), while Q/17 got the correct answer percentage where it got (78.6%). Regarding prognosis of cystic fibrosis has improved due to earlier diagnosis through screening and better treatment and access to health care[17]. the median age of survival of children with CF in the United States was six months. In 2010, survival is estimated to be 37 years for women and 40 for men.[18]. In Canada, median survival increased from 24 years in 1982 to 47.7 in 2007. In the United States those born with CF in 2016 have an expected life expectancy of 47.7 when cared for in specialty [19].

#### 4. Conclusions

The study concluded that mean of score for 50% of the answered questions were significant corresponding knowledge for incidence of cystic fibrosis

---

## Compliance with ethical standards

### *Acknowledgments*

Cystic fibrosis; Nurses. Assessment; Medical staff

### *Disclosure of conflict of interest*

There are no conflicts of interest

### *Statement of informed consent*

There is no study for anyone, but a study that is within the university study

---

## References

- [1] Chee Y Ooi, Peter R Durie. Cystic fibrosis from the gastroenterologist's perspective. *Nat Rev Gastroenterol Hepatol*,2015: 13(3):175-85. doi: 10.1038/nrgastro.2015.226..
- [2] Blackman SM, Deering-Brose R, McWilliams R, Naughton K, Coleman B, Lai T, et al.. "Relative contribution of genetic and nongenetic modifiers to intestinal obstruction in cystic fibrosis". *Gastroenterology*. 2006:131 (4): 1030–9.
- [3] Guimbellot J, Sharma J, Rowe SM. "Toward inclusive therapy with CFTR modulators: Progress and challenges". *Pediatric Pulmonology*.2017: 52 (S48): S4–S14. doi:10.1002/ppul.23773. PMC 6208153. PMID 28881097.
- [4] Sharma J, Keeling KM, Rowe SM. "Pharmacological approaches for targeting cystic fibrosis nonsense mutations". *European Journal of Medicinal Chemistry*.2020: 200: 112436. doi:10.1016/j.ejmech.2020.112436. PMC 7384597. PMID 32512483.
- [5] Rowe SM, Miller S, Sorscher EJ. "Cystic fibrosis". *The New England Journal of Medicine*.2005: 352 (19): 1992–2001.
- [6] Bobadilla JL, Macek M, Fine JP, Farrell PM. "Cystic fibrosis: a worldwide analysis of CFTR mutations--correlation with incidence data and application to screening". *Human Mutation*.2002: 19 (6): 575–606. doi:10.1002/humu.10041. PMID 12007216. S2CID 35428054.
- [7] Edwards QT, Seibert D, Macri C, Covington C, Tilghman J."Assessing ethnicity in preconception counseling: genetics--what nurse practitioners need to know". *Journal of the American Academy of Nurse Practitioners*. 2004:16 (11): 472–80. doi:10.1111/j.1745-7599.2004.tb00426.x. PMID 15617360. S2CID 7644129.
- [8] Allen JL, Panitch HB, Rubenstein RC. *Cystic Fibrosis*. CRC Press. 2016:p. 92. ISBN 9781439801826. Archived from the original on 8 September 2017.
- [9] Tobias E. *Essential Medical Genetics*. John Wiley & Sons. 2016:p. 312. ISBN 978-1-118-29370-6. Archived from the original on 17 April 2016.
- [10] *The Canadian Facts & Figures on Cystic Fibrosis*". cysticfibrosis.ca. Archived from the original on 16 June 2013.
- [11] *Genetic Carrier Testing*". Cystic Fibrosis Foundation. 2007. Archived from the original on 23 March 2010.
- [12] Farrell P, Joffe S, Foley L, Canny GJ, Mayne P, Rosenberg M. "Diagnosis of cystic fibrosis in the Republic of Ireland: epidemiology and costs". *Irish Medical Journal*. 2007:100 (8): 557–60. PMID 17955689. Archived from the original on 3 December 2013.
- [13] James G Cunningham; Bradley G Klein · St. Louis,Elsevier/Saunders,Cunningham's textbook of veterinary physiology ; ©2013. • Print book : English : 5th ed: Print book: English: 5th edVie
- [14] Hardin DS. "GH improves growth and clinical status in children with cystic fibrosis -- a review of published studies". *European Journal of Endocrinology*. 2004:151 Suppl 1 (Suppl 1): S81-5. doi:10.1530/eje.0.151S081. PMID 15339250..
- [15] De Lisle RC. "Pass the bicarb: the importance of HCO<sub>3</sub><sup>-</sup> for mucin release". *The Journal of Clinical Investigation*.2009: 119 (9): 2535–7. doi:10.1172/JCI40598. PMC 2735941. PMID 19726878.

- [16] Editorial Team ,How Does Cystic Fibrosis Affect Mental Health and Wellbeing? <https://cystic-fibrosis.com/depression-anxiety:2019>.
- [17] Davis PB. "Cystic fibrosis since 1938". *American Journal of Respiratory and Critical Care Medicine*.2006: 173 (5): 475–82. doi:10.1164/rccm.200505-840OE. PMID 16126935. S2CID 1770759
- [18] MacKenzie T, Gifford AH, Sabadosa KA, Quinton HB, Knapp EA, Goss CH, Marshall BC (August 2014). "Longevity of patients with cystic fibrosis in 2000 to 2010 and beyond: survival analysis of the Cystic Fibrosis Foundation patient registry". *Annals of Internal Medicine*. 161 (4): 233–41. doi:10.7326/m13-0636. PMC 4687404. PMID 25133359..
- [19] "Canadian Cystic Fibrosis Patient Data Registry Report" (PDF). Canadian Cystic Fibrosis Foundation. 2007. Archived from the original (PDF) on 15 July 2010. Retrieved 14 March 2010.
- [20] WASFI DHAHIR ABID ALI , LUAY ABDULWAHID SHIHAB , MARYAM ABDULKAREEM ABDULRAZAQ , NOOR SABAH DAIF , & NABAAMUSSAB HASSAN, ASSESSMENT OF TEACHERS' KNOWLEDGE ABOUT FIRST AID SOME BASRAH CITY SCHOOLS, *BEST: International Journal of Humanities, Arts, Medicine and Sciences (BEST: IJHAMS)* ISSN (P): 2348–0521, ISSN (E): 2454–4728 Vol. 9, Issue 02, Feb 2021, 7–12.