Academia Open
Vol 9 No 2 (2024): December
DOI: 10.21070/acopen.9.2024.10306 . Article type: (Clinical Research)

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ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

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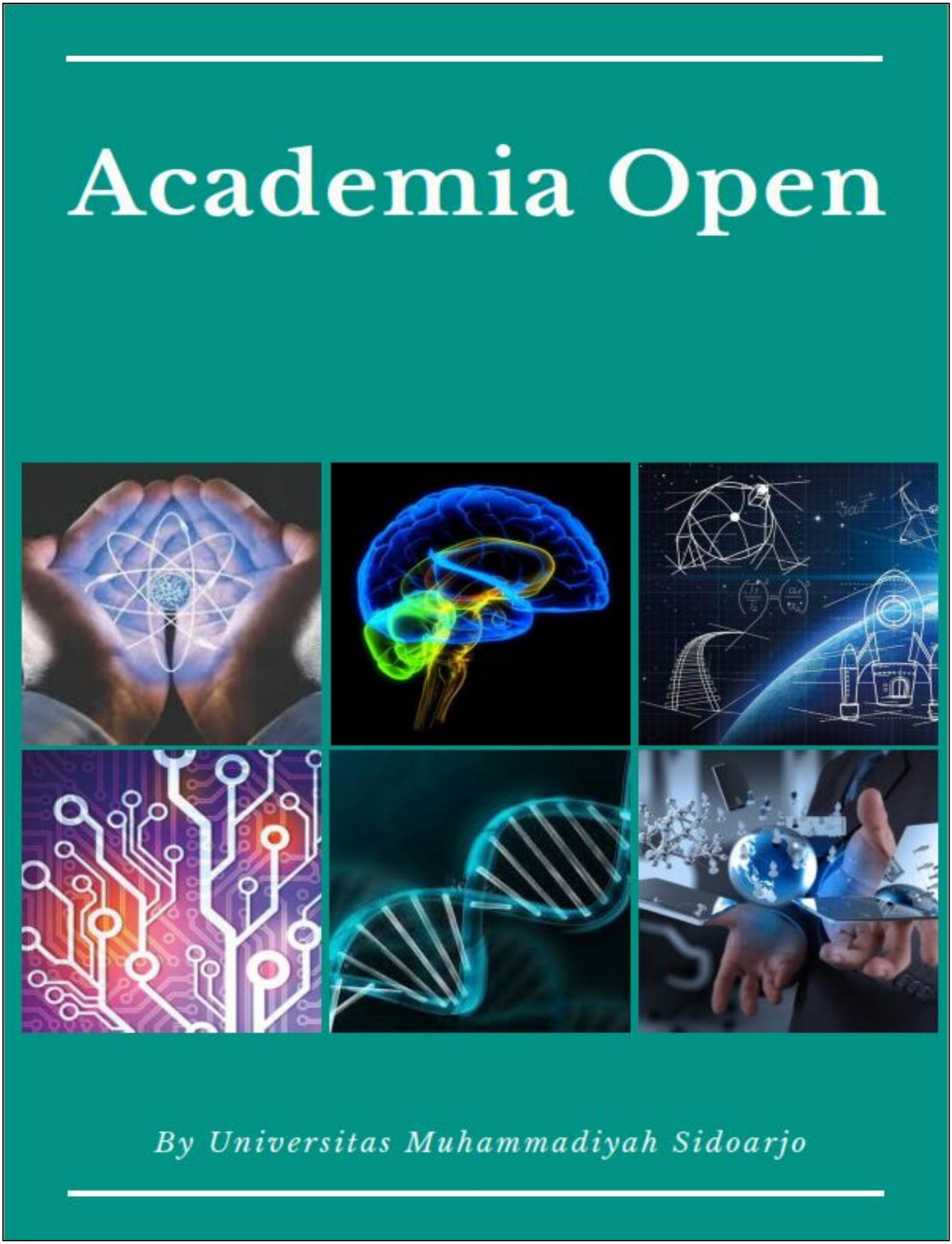

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ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

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ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

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Nurses' Knowledge of Nonalcoholic Fatty Liver Disease: A Cross-sectional Study

Pengetahuan Perawat tentang Penyakit Hati Berlemak Nonalkohol: Sebuah Studi Cross-sectional

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Abstract

General Background: Non-alcoholic fatty liver disease (NAFLD) encompasses a spectrum of liver conditions, including simple steatosis, cirrhosis, liver cancer, and non-alcoholic steatohepatitis (NASH). **Specific Background**: Given the increasing prevalence of NAFLD, understanding healthcare professionals' knowledge about this condition is crucial for effective patient care and management. **Knowledge Gap**: However, there is limited research assessing nurses' knowledge regarding NAFLD, particularly in the context of Basrah City Center Hospitals. **Aims**: This study aimed to evaluate nurses' knowledge of NAFLD and investigate its relationship with demographic characteristics such as gender, age, years of experience, and departmental affiliation. **Results**: A cross-sectional survey involving 150 nurses revealed that 57.3% possessed high levels of knowledge regarding NAFLD, while 34% had moderate knowledge. Notably, a significant correlation was found between nurses working at Al-Shifaa Hospital and their knowledge levels. The majority of participants were female (64.7%) and aged 20-30 (72%), with a predominant educational background from Nursing Institutes (39.3%) and fewer than five years of experience (56%). **Novelty**: This study is pioneering in assessing the knowledge of NAFLD among nurses in Basrah, highlighting specific areas of strength and weakness in their understanding. **Implications**: The study highlights the need for targeted educational interventions to improve nurses' understanding of NAFLD, leading to improved patient care and outcomes in liver disease management. practice.

Highlights:

1. Increasing NAFLD prevalence necessitates enhanced healthcare provider awareness.
2. Nurses showed significant knowledge levels about NAFLD.
3. Knowledge varies significantly by hospital affiliation.

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

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Keywords: Non-alcoholic fatty liver disease, nurses' knowledge, Basrah City, cross-sectional study, healthcare education.

Published date: 2024-06-16 00:00:00

Academia Open
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Introduction

The most prevalent liver condition is fatty liver. When fat builds up inside the liver cells, it can lead to steatosis, or enlarged cells, and occasionally steatohepatitis, or damaged cells. Cirrhosis may result from this [1] it is observed in those who are overweight, obese, or have diabetes but do not use large amounts of alcohol [2]. The upper right side of the abdomen gets uncomfortable due to the enlarged liver. Liver failure, a potentially fatal illness, can result from cirrhosis. Early intervention, however, can allow the liver to recover. Simple steatosis, cirrhosis, liver cancer, and steatohepatitis (NASH) are all included in the clinical entity known as non-alcoholic fatty liver disease (NAFLD). Despite not having a history of heavy alcohol consumption, individuals with nonalcoholic fatty liver disease (NAFLD) have histological alterations like those of alcoholic fatty liver disease. NAFLD has been characterized as the hepatic manifestation of metabolic syndrome. In both Western nations and the Asia-Pacific area, the prevalence of NAFLD has been sharply rising [1]. Bariatric surgery is one of the most crucial treatments for non-alcoholic fatty liver disease [3].

The pathogenetic process of NASH is commonly explained by the so-called "two-hit theory." The "second hit" is defined by the activation of oxidative stress and inflammatory cytokines as a result of fat storage and worsening insulin resistance, while the "first hit" is excessive fat formation in the liver brought on by a high daily calorie and fat consumption [4]. In the US and other industrialized nations, nonalcoholic fatty liver disease (NAFLD) has become the most prevalent liver disease [5]. In the USA, about 30% of individuals suffer from NAFLD [6]. This is concerning since NAFLD can lead to cirrhosis and hepatocellular cancer, both of which have a high mortality risk from associated comorbidities, as well as liver inflammation and different stages of fibrosis [7].

Nonalcoholic fatty liver disease, or NAFLD, affects 1.8 billion individuals worldwide and has a 25% prevalence rate [8]. The yearly direct medical expenses for treating nonalcoholic fatty liver disease (NAFLD) are $1,612 per patient [9].

The diagnosis, management, and development of NAFLD to NASH should be explained to nurses. As previously said, NAFLD is frequently discovered at random since patients typically do not exhibit any symptoms, as signs of chronic liver disease do not emerge until the illness has advanced. Because NAFLD is associated with metabolic syndrome, nurses who treat patients with cardiovascular disease, obesity, and type 2 diabetes may encounter patients who also have NAFLD and NASH without even realizing it. Therefore, nurses should be on the lookout for elevated liver enzymes, complaints of pain and discomfort in the right upper quadrant of the abdomen, or evidence of steatosis on a scan [7].

Methods

A descriptive cross-sectional study on Assessment of Nurses' Knowledge toward Nonalcoholic Fatty Liver Disease in Basra City Centre Hospitals. From November 1, 2023, to April 1, 2024, the research period was prolonged. Formal administrative approvals were acquired before data collection for the project. The researcher has received clearance from the Ministry of Health and Environment/Al-Basrah Health Directorate/Department of Human Development and Training Center in addition to ethical approval from the University of Basrah/College of Nursing's Ethical Researcher Committee.

Before each nurse took part in the study, the researcher described its goal. It was determined that the research maneuver would cause no real or prospective injury to the study sample. Each nurse provided oral consent before data collection began. The study was conducted in operations, department of Internal Medicine, emergency and surgery at Al-Sader Teaching Hospital, Al-Faiha Teaching Hospital, Al-Basrah Teaching Hospital, Al-Shifaa Hospital, Hospital Liver Disease and digestive system, and Al-Mawani Teaching Hospital in Al-Basrah Governorate.

A total of 160 nurses who work in operating rooms and surgical wards are included in the intentional (non-probability) sample. (10) The study did not include nurses from the pilot research.

Nurses who consent to take part in this study, nurses of all sexes, and nurses at every educational level are among the inclusion criteria. Exclusion Criteria include Nurses refusing to participate in the study. To achieve the aims, the researcher developed a questionnaire based on a thorough review of relevant literature and prior studies, which was then utilized to collect data for Nonalcoholic Fatty Liver Disease. It consists of four parts. A constructive knowledge questionnaire was used by the researcher to gather data, and direct interviews were used to get answers. The date of the data collection was moved from November 27, 2023, to February 27, 2024.

A Likert scale of three (3) points, ranging from 1 to (3), was employed by the researcher. The 31 questions that make up this scale were scored using a three-point Likert scale, with 1 denoting "don't know," 2 denoting "uncertain," and 3 denoting "know." Each nurse was given ten to fifteen minutes to complete the test. Each knowledge scale item's assessment level was determined by determining the cut-off point for the score mean, and the results were scored as follows: The researcher identified intermediate knowledge as 1.67–2.33, high knowledge as 2.34–3, and inadequate knowledge as 1.66–1.66. The Statistical Package for Social Sciences (SPSS) version 20

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was used to analyze the data from the current study.

Result and Discussion

Demographic Characteristics			
Demographic Data	**Classes**	**Frequency**	**Percent**
Gender	**Female**	**97**	**64.7%**
	Male	**53**	**35.3%**
	Total	**150**	**100 %**
Age	**20-29**	108	**72%**
	≥30	42	**28.0%**
	Total	150	**100%**
Education level	**Secondary School**	42	**28.0%**
	Nursing Institute	59	**39.3%**
	College of Nursing	49	**32.7**
	Total	150	**100%**
Years of experience	**Less than 5**	84	**56%**
	More than 5	66	**44 %**
	Total	150	**100 %**
Name of hospital	**Al-Basrah Teaching Hospital**	32	**21.3**
	Al-Sader Teaching Hospital	21	**14.0**
	Al- Faiha Teaching	35	**23.3**
	A-Ṣhifaa Hospital	20	**13.3**
	Al-Mawani Teaching Hospital	20	**13.3**
	Hospital liver disease and digestive system	22	**14.7**
	Total	150	**100 %**
Place of Work	**Operations**	16	**10.7 %**
	Department of Internal Medicine	40	**26.7 %**
	Emergency	34	**22.7 %**
	Surgical wards	**60**	**40%**
	Total	150	**100 %**
Training Course	**Yes**	**112**	**75 %**
	No	**38**	**25 %**
	Total	**150**	**100 %**

Figure 1. *Demographic Characteristics of the Nurses*

The sociodemographic details of the nurses participating in this study are displayed in this table. 72% were in the 20–30 age range, and 64.7% were female. In terms of educational levels, the Nursing Institute has the greatest share (39.3%). In terms of years of experience, those with fewer than five years have the biggest share (56%). Forty percent of them work in the surgical department.

Nurses' Knowledge						
Assessment levels	**F**	**Percent**	**Scale**	**Total**		
				Mean Score	**Sd**	**Assessment**
Poor	**13**	**8.7%**	**1 – 1.66**	**2.50**	**0.690**	**good**
Moderate	**51**	**34.0%**	**1.67 – 2.33**			
Good	**86**	**57.3%**	**2.34 – 3**			
Total	**150**	**100 %**				

Figure 2. *Nurses' Knowledge Concerning Nonalcoholic Fatty Liver Disease*

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F = frequency, Sd=Standard Deviation.

According to the mean score and standard level deviation, which are 2.50+0.690, the majority of nurses (57.3%) have high knowledge of nonalcoholic fatty liver disease, 34% have moderate knowledge, and 8.7% have low knowledge.

Demographic Data	Classes	Knowledge				Significant
		Poor	Moderate	Good	total	
Gender	Male	1	22	30	53	P-Value= 0.05
	Female	12	29	56	97	
	Total	13	51	86	150	
Age	20-29	10	37	60	107	P-Value= 0.7
	More then 30	4	13	26	43	
	Total	14	50	86	150	
Education Level	Secondary School	1	18	23	42	P-Value= 0.3
	Institute	6	20	33	59	
	College	6	13	30	49	
	Total	13	51	86	150	
Years of Experience	Less than 5	6	28	50	84	P-Value= 0.3
	More than 5	7	13	36	56	
	total	13	51	86	150	
Name of hospital	Al-Basrah Teaching Hospital	3	15	14	32	P-Value= 0.01* S
	Al-Sader Teaching Hospital	0	9	12	21	
	Al- Faiha Teaching	8	12	15	35	
	A-Şhifaa Hospital	0	4	16	20	
	Al-Mawani Teaching Hospital	1	6	13	20	
	Hospital liver disease and digestive system	1	5	16	22	
	Total	13	51	86	150	
Place of Work	Operations	1	4	11	16	P-Value= 0.3 NS
	Department of Internal Medicine	4	10	26	40	
	Emergency	1	16	17	34	
	Surgical wards	7	21	32	60	
	total	13	51	86	150	
Training Course	Yes	11	38	63	112	P-Value= 0.8 NS
	No	3	13	22	38	
	total	13	51	86	150	

Figure 3. *Relationships of Demographic Variables with Nurses' Knowledge*

Df: Degree of freedom, NS: Not Significant, S: significance.

With a P-value < 0.05, this table demonstrates a substantial correlation between nurses' expertise and the hospital name. Al-Shifaa and (6) digestive system hospitals recorded the highest levels of knowledge (16 good knowledge) compared with other hospitals. Additionally, the results of this table demonstrate that, at a P-value > 0.05, there is no significant correlation between nurses' knowledge and their gender, age, years of experience, and location of employment.

Discussion

In terms of gender, the majority of the samples in this study are female, accounting for 64.7% of the total. This research concurred with [10], This shows that women made up the majority of responders (63.4%). 72% of the characteristics of the current population included in this study fall into the 20–29 age group, which is a plus since they have a greater desire to learn more and advance their knowledge. The nursing institute had the highest percentage in this survey (39.3%). We have a nurse technical institute. We have a nursing college, nursing institute, and nursing secondary school in Iraq. Graduates of the Nursing Institute and Nursing Secondary School work in almost every ward. College-educated nurses, on the other hand, are underpaid and work in critical wards. It was discovered that the majority of nurse samples are employed by Al-Basrah Teaching Hospital and Al-Fayhaa Hospital (21.3 and 23.3%, respectively).

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In the workplace, it was found that a large percent present in nurses worked in the surgical wards (40.0%) due to the most study sample work in surgical wards. It was found that nurses with years of experience less than five years had a higher rate of 56.0%. This may be because the majority of the nurses studied were of young age range (20-29) years old (72%) and therefore had less experience. Concerning training courses, most nurses have training courses 75.0. This result disagreed with [11], who showed a majority of their samples (57.2%) had not attended a lecture or read a guideline on Nonalcoholic Fatty Liver Disease.

Training courses are held for nursing staff to develop workers' skills and improve performance. Given the importance of the disease and the interactions of the symptoms of the disease with other diseases, this was the goal of the training courses held for workers within this field. To avoid complications and lessen the burden of disease, this aids in improving nursing education and improving the identification of high-risk patients [10].

at order to determine educational requirements, our study sought to evaluate nurses' knowledge of NAFLD who worked at hospitals in Basrah City Center. For that reason, three areas were assessed: general and definitional knowledge, and disease risk factors. In addition, the diagnosis, treatment, and complications. The results show that while 34% of nurses have an intermediate understanding of nonalcoholic fatty liver disease, the majority (57.3%) have strong knowledge. This result indicates good knowledge concerning Nonalcoholic Fatty Liver Disease may result from most nurses having training courses and workplace hospitals and wards that specialize in treating conditions related to the disease. This study disagreed with [10], who concentrate on issues that might make it difficult to prioritize NAFLD, which could then be reflected in the community's lack of knowledge of the disease. This outcome was in conflict with [10], who showed a majority of their samples (57.2%) had not attended a lecture or read a guideline on Nonalcoholic Fatty Liver Disease.

The results of this study indicate that nurses' awareness of the name of the hospital where they work is significantly correlated with the demographic characteristics of the study group. The majority had good knowledge of Al-Shifaa Hospital and the digestive system in Al-Basrah Governorate. maybe this result because it specializes in treating conditions related to the disease. To our knowledge, our study is the first study that evaluated nurses' knowledge of non-alcoholic fatty liver disease in Basra Governorate in particular and Iraq in general. This is why it is difficult to discuss the results with other studies, but international studies are limited and we need more studies in this regard. The results of the current study agreed with a study [10], which stated there is a nonsignificant relationship between nurses' knowledge and their (age and gender).

Conclusion

Most of the nurses in this research were female, aged between 20 and 29, had attended nursing school, had one to five years of experience, worked on surgical wards, and had taken courses on nonalcoholic fatty liver disease. The majority of the nurses who took part in this study were well-versed in nonalcoholic fatty liver disease in all areas, including definitions, risk factors, and basic information. Moreover, issues, diagnosis, and therapy. The nurses' knowledge and the hospital's name are significantly correlated. Demographic information (gender, age, years of experience, and location of employment) and nurses' expertise do not significantly differ from one another.

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