Effectiveness of Instructional Program in Improve Patients Attitudes towards Atrial Fibrillation in Al-Diwaniyah Teaching Hospital

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Abstract

Objectives: The study aimed to assess the effectiveness of an instructional program on patients' attitudes towards atrial fibrillation.

Method: A quasi-experimental study conducted at Al-Diwaniyah Teaching Hospital for the period from September 7th, 2022 to April 14th, 2023. The study sample consisted of (60) patients divided into two groups, the study group consisted of (30) patients who were exposed to the instruction program, and the control group consisted of (30) patients not exposed to the program. The effectiveness of the instruction program was measured through a questionnaire consisting of (17) items to measure their attitudes. The validity was determined by a panel of experts and the reliability of the tool was determined by a pilot study. Data were collected through interviews and analyzed by applying descriptive and inferential statistical analysis..

Results: The results indicated that the average age of the participants in the study group was 44.8 and the average age in the control group was 50.7. Most of them were males in the study group (73.3%) and the control group (53.3%), and most of them could only read and write. The results reveal that there is no statistically significant difference in the attitudes scores between the study and control groups in the pre-test period for measurement (t = 0.605; p = 0.547). While there was a statistically significant difference in the attitudes scores between the study group and the control group in the post-test period for measurement (t = 3.982; p = 0.000).

Conclusions: The study concluded that the patients had negative attitudes toward towards the atrial fibrillation before implementation of the instructional program and after applying the instruction program, there were improvements in their attitudes. Highlighting the conduct of such programs on atrial fibrillation patients in large samples regardless of age, gender and educational level.

Key-wards: Instructional Program, Patients Attitudes, Atrial Fibrillation.

INTRODUCTION

The most frequent persistent arrhythmia in which the heart beats irregularly and excessively quickly or slowly is atrial fibrillation (AF). Patients with AF frequently feel their hearts pounding or racing and experience symptoms like fatigue, dizziness, shortness of breath, chest pain, and difficulties exercising [1]. Even before symptoms appear, AF can have an impact on a patient's health. Prior focus groups and patient interviews suggested that some doctors did not take patients' symptoms seriously, making it challenging to diagnose AF. Additionally, it was discovered that AF had an impact on patients' emotional health, social connections, employment, and personal finances [2]. According to earlier research, the prevalence of AF increased 20 times between 2001 and 2012. According to the Framingham Heart Study, those with AF have a more than 5-fold increased risk of having an ischemic stroke compared to people without AF. Therefore, the primary management goal for patients with AF is stroke prevention, which is decided by both the patient and the doctor [3]. Changes in behavior and higher treatment compliance can be attributed to patients' attitudes on their atrial fibrillation and its management [4]. According to reports, the majority of patients expressed indifferent opinions towards AF (neither agreeing with it nor disagreeing). Patients with higher levels of education saw better outcomes than patients with lower levels. Patients with AF who were employed or retired had much better attitudes than other patients [5]. The importance of education in the management of chronic conditions has long been acknowledged. While education has been tested in populations with atrial fibrillation (AF), it has been found to be effective in improving patient attitudes and is considered a part of self-management because patient attitudes are crucial in the management of AF [6]. Although atrial fibrillation increases the risk of stroke, there are still drawbacks to preventing atrial fibrillation. Patients play an essential role in the management of atrial fibrillation, and thus clinicians

may be well placed to advise and educate patients in all aspects of anticoagulation, including self-management. However, negative attitudes often leads to suboptimal communication and decision making. The attitudes of patients associated with atrial fibrillation may determine self-care behavior and avoid complications leading to cardiac arrest. There have been few patient-focused investigations in terms of atrial fibrillation, and research in this area has not been reported in Iraq.

METHODS

A quasi experimental design was carried out at Al-Diwaniyah Teaching Hospital in AL-Qadisiyah Province for period 7th September 2022 to 14th April 2023.

A purposive sample comprised of (60) patients was divided into two groups, study group consisted of (30) patients exposed to the instructional program and control group consisted of (30) patients were not exposed to the program. The measurement of

effectiveness of instructional program throughout they use of (17) attitudes items questionnaire. Validity was determine throughout a panel of expert and reliability of instrument was determine throughout the use test and retest the instrument.

The researcher interviewee the participants, explained the instructions, answered their questions regarding the form, urged them to participate and thanked them for the cooperation. The interview techniques was used on individual bases, and each interview (15-20) minutes after taking the important steps that must be included in the study design.

Through the use SPSS 20.0 program was used for all the analyses that follow. Numbers and percentages (No. and %) were used to categorize the variables, while the mean and standard deviation were used to characterize the continuous variables (mean and SD). Chi-square to determine the relationship and t-test to determine the significant differences. Statistical significance was defined as a two-tailed p .05.

RESULTS

Table (1):Socio-Demographic Characteristics

SDVs	Classification	Study		Control		*Chi-square*	*Sig.*
		No.	%	No.	%		
Age/yer	20-29 years old	4	13.3	3	10.0	*14.919*	*.062 No-sig.*
	30-39 years old	7	23.3	2	6.7		
	40-49 years old	10	33.3	4	13.3		
	50 and older	9	30.0	21	70.0		
	M± SD	*44.8 ± 10.15*		*50.7 ± 10.68*			
Gender	Male	22	73.3	19	63.3	*1.841*	*.186 No-sig.*
	Female	8	26.7	11	36.7		
Education Level	Illiterate	6	20.0	7	23.3	*23.001*	*.767 No-sig.*
	Read and write	13	43.3	10	33.3		
	Elementary school	1	3.3	1	3.3		
	Middle school	6	20.0	6	20.0		
	High school	2	6.7	4	13.3		
	College	2	6.7	2	6.7		
Occupation	Unemployment	7	23.3	12	40.0	*11.919*	*.092 No-sig.*
	Employment	14	46.7	12	40.0		
	Retired	4	13.3	4	13.3		
	Free-business	5	16.7	2	6.7		
Residents	Urban	22	73.3	24	80.0	*,863*	*.776 No-sig.*
	Rural	8	26.7	6	20.0		
Smoking status	Yes	20	66.7	16	53.3	*1,721*	*.391 No-sig.*
	No	10	33.3	14	46.7		

Findings show participants characteristics, the mean age for patients in study group is 44.8 (±10.15) and the mean age in control group is 50.7 (±10.68). In

regards with gender, the male were predominated in study (73.3%) and control (53.3%) groups. Concerning education level, participants in study and control

groups expressed read and write only (43.3% and 33.3) respectively. Occupation related findings, (46.7%) were employment in study groups and in control group (40%) were unemployment and (40%) were employment. In terms of residents, the urban residents were predominated in both groups (73.3% and 80%) respectively. Smoking status related finding, most of participants expressed smokers in study (66.7%) and control (53.3%) groups.

Table (2): Overall Patients Attitudes about Atrial Fibrillation in Study Group

Study Group Attitudes	Pre-test			Post-test		
	No.	%	M ± SD	No.	%	M ± SD
Negative	13	43.3	27.26 ± 15.42	2	6.7	47.21 ± 12.95
Neutral	15	50.0		7	23.3	
Positive	2	6.7		21	70.0	
Total	30	100.0		30	100.0	

The results showed that (50%) of the patients expressed a neutral attitudes regarding atrial fibrillation in the pre-test as indicated by a moderate mean total score equal to 27.26 (±15.42). While the results showed that, after applying the instructional program, (70%) of the patients expressed a positive attitudes in the post-test as indicated by the high average overall score 47.21 (±12.95).

Table (3): Overall Patients Attitudes about Atrial Fibrillation in Control Group

Control Group Attitudes	Pre-test			Post-test		
	No.	%	M ± SD	No.	%	M ± SD
Negative	11	36.7	29.64 ± 14.86	8	26.7	32.56 ± 15.40
Neutral	16	53.3		18	60.0	
Positive	3	10.0		4	13.3	
Total	30	100.0		30	100.0	

The results showed that (53.3%) of the patients expressed a neutral attitudes regarding atrial fibrillation in the pre-test as indicated by a moderate mean total score equal to 29.64 (±14.86). While the results showed that, after period of time has been passed, (60%) of the patients expressed a neutral attitudes in the post-test as indicated by the moderate average overall score 32.56 (± 15.40).

Table (4): Statistical Differences in Attitudes Scores between the Study and Control Group responses at pre-post test

Periods	Groups	M	SD	Std. Error	t-value	d.f	Sig.
Pre-test Attitudes	Study	1.60	.907	.16566	.605	58	.547
	Control	1.74	.874	.15966			
Post-test Attitudes	Study	2.77	.762	.13913	3.982	58	.000
	Control	1.91	.906	.16541			

The results reveal that there is no statistically significant difference in the attitudes scores between the study and control groups in the pre-test period for measurement (t = 0.605; p = 0.547). While there was a statistically significant difference in the attitudes scores between the study group and the control group in the post-test period for measurement (t = 3.982; p = 0.000).

Table (5): Statistical Relationship between Patients Attitudes towards AF and Sociodemographic Data (Study Group)

Variables	Rating	Attitudes			Total	d.f	Sig.
		Negative	Neutral	Positive			

Age	20-29 years old	0	2	2	4	6	χ^2= 4.706 p=.582
	30-39 years old	1	1	5	7		
	40-49 years old	1	3	6	10		
	50 and older	0	1	8	9		
	Total	2	7	21	30		
Gender	Male	1	5	16	22	2	χ^2= .657 p=.720
	Female	1	2	5	8		
	Total	2	7	21	30		
Education level	Illiterate	1	2	3	6	10	χ^2= 7.628 p=.665
	Read and write	1	2	10	13		
	Elementary school	0	1	0	1		
	Middle school	0	1	5	6		
	High school	0	0	2	2		
	College	0	1	1	2		
	Total	2	7	21	30		

The results showed that there were no statistically relationship between attitudes in study group and patients sociodemographic characteristics such as age, gender and education level.

DISCUSSION

Socio-demographic Characteristics

The mean age for patients in study group is 44.8 (±10.15) and the mean age in control group is 50.7 (±10.68), the age 40-49 years old were recorded the highest percentage in study group (33.3%) and age 50 and older in control group (70%). This findings come in agreement with findings from Al-Muthana Teaching Hospitals, the majority of respondent 41-50 years [7]. This findings come due to chronic and cardiac diseases most commonly occurs among higher mean age.

In regards with gender, the male were predominated in study (73.3%) and control (53.3%) groups, as compared with those who are female (26.7% and 36.7%) respectively. This findings come in agreement with findings from Cardiac Centers in Baghdad City, the most of respondent undergo percutaneous coronary intervention in study and control groups were male (63% and 70%) respectively [8]. Also, this findings in line with findings from AL-Najaf AL-Ashraf City, the majority of participants with hypertension participated in education program were male [9].

Concerning education level, participants in study and control groups expressed read and write only (43.3% and 33.3) respectively in study and control groups. This findings is supported by findings from Bagdad city at Gastroenterology and Hepatology Teaching Hospital, the most of patients with ulcerative colitis were primary school graduated [10].

Occupation related findings, (46.7%) were employment in study groups and in control group (40%) were unemployment and (40%) were employment. This findings is supported by findings from Al-Diwaniyah Teaching Hospital, most of participants included in their education program were employed [11].

In terms of residents, the urban residents were predominated in both groups (73.3% and 80%) respectively study-control groups. This findings is supported by findings from Al Nasiriyah Heart Center, the most of patent with coronary artery disease were urban residents [12]. Most of the participants are from urban areas, depending on the place of study, adding to the urban community more than the rural community.

Patients Attitudes towards Atrial Fibrillation

Attitude of patients about their atrial fibrillation and its treatment are important factors for changing behavior and increasing compliance with treatment. In current study findings among study group, the results showed that (50%) of the patients expressed a neutral attitudes regarding atrial fibrillation in the pre-test (M=27.26; SD=15.42). While the results showed that, after applying the instructional program, (70%) of the patients expressed a positive attitudes in the post-test as indicated by the high average overall score 47.21 (±12.95). Among control group, results showed that (53.3%) of the patients expressed a neutral attitudes regarding atrial fibrillation in the pre-test (M=29.64; SD=14.86). After period of time has been passed, (60%) of the patients expressed a neutral attitudes in the post-test (M=32.56; SD=15.40). This means that their attitudes do not improve with time, but they need to instructional program.

To ensure the effectiveness of the current instructional program, results show that there is a significant difference in attitudes scores in two periods of measurements as a pre-test (before the instructional program) and a post-test (after the instructional program) (t = 6.008; p = .000). With respect to the statistical mean, the study results indicate that the patients with AF in the study group have poor knowledge to the same degree as the patients in the control group. While there are no statistically significant differences in attitudes in the control group between the pre and post test (t = 1.431; p = 0.163).

Moreover, results reveal that there is no statistically significant difference in the attitudes scores between the study and control groups in the pre-test period for measurement (t = .605; p = .547). While there was a statistically significant difference in the attitudes scores between the study group and the control group in the post-test period for measurement (t = 3.982; p = .000). Conducting such instruction program is effective in raising the level of attitudes about atrial fibrillation and is therefore highly recommended.

Summing up, current instruction program found statistically significant improvement in participants' attitudes following the instruction intervention. This finding suggested that the individuals that participated in this study had suboptimal attitudes regarding AF. These findings are similar to previous studies on improving attitudes towards AF and cardiac diseases [13][14]. Education sessions focused on improving attitudes can improve self-care, medication adherence, health outcomes and decrease readmission rates among individuals with AF [15].

This findings agreement with findings from Virginia, emphasized there were statistically significant improvement in participants' attitudes on AF. Total sample size was 27, with less than Bachelor degree. There was a statistically significant difference between pre-test and post-test attitudes scores [t = 6.59, p < 0.001]. The mean score of attitudes increased from13.42 (3.45) to 17.69 (0.55) after the educational intervention [16]. Also, it is reported that the most of patients were neutral in their responses toward AF (neither agree nor disagree). Patients with a high level of education had more positive than those with low education. Employer or retired patients with AF were significantly improved attitudes than other patients [9]. Education has long been recognized as an important component of chronic condition management. Whereas education has been evaluated in atrial fibrillation (AF) populations as part of multifaceted interventions, it has effective to improves patients attitudes and considered a part of self management, because the patients attitudes play an importance roles in AF treatment [17].

Successful implementation of this project and its outcomes could improve patient outcomes, including reducing the risk of atrial fibrillation, improving quality of life, and reducing readmission to hospital. The targeted educational sessions significantly improved the participants' knowledge and attitudes about atrial fibrillation. Additional educational interventions may be required to enhance this effect.

Further research is warranted to assess the effect on long-term adherence and improved quality of life. This study supports the provision of atrial fibrillation education to diagnosed patients through an educational intervention in pre- and post-test coordination. However, there is a lack of such interventions in healthcare settings. Evaluation of the intervention indicates that participants in Al-Diwaniyah found the intervention useful and were in agreement that it increased their attitudes of atrial fibrillation and improved their confidence and attitudes regarding self-management of the condition.

The sample size, although small, was adequate for this project. However, caution should be implemented while generalizing this study's findings to larger populations. Since there are no differences in benefiting from the instructional program according to different age groups, gender and educational levels, these patients expressed their interest in participating. Future research should include patients of any age, gender, or education level who are potentially at high risk. Although there were some limitations, the project was successful in increasing the knowledge and attitudes among those who diagnosed with AF in Al-Diwaniyah city. This agreement with findings from Al- Hussein Teaching Hospital and Endocrine Center in Al- Nasiriyah City and Baghdad Teaching Hospital, the education program were effective and not related to participants age, gender and education level [18][19][20].

The results of this instructional program based on educational sessions on atrial fibrillation were effective in improving attitudes. Future research projects should include a follow-up study to measure the change in participants' knowledge regarding atrial fibrillation and its management several months after the educational intervention. This plan should be created in collaboration with health care providers such as nurses in different clinics and hospitals to enhance the sustainability of the project. Studies show

that targeted patient education interventions with the provision of information pamphlets can significantly improve attitudes and self-management in chronically ill patients [21][22]. Education is a critical component of chronic disease management. By enhancing individualized patient education such as this project, it is expected that patient outcomes for self-management will be improved.

There were accept research hypothesis that demonstrated significant differences in knowledge and

CONCLUSIONS

The study concluded that the patients had negative attitudes toward towards the atrial fibrillation before implementation of the instructional program and after applying the instruction program, there were improvements in their attitudes. Highlighting the conduct of such programs on atrial fibrillation patients in large samples regardless of age, gender and educational level.

attitudes scores between before (pre-test) instructional program and after (post-test) application. This instructional program was developed to increase knowledge and attitudes through an instruction intervention based on instructions sessions. This intervention was beneficial for participants in the Al-Diwaniyah city. It also improved their attitudes and level of confidence in self-management of the disease. Further study is needed to examine the long-term effect of such an intervention.

REFERENCES

1. Makhmudov A. DISORDER OF HEART RHYTHM. ATRIAL FIBRILLATION. Science and innovation. 2022;1(D6):366-70.

2. Essien UR, Kornej J, Johnson AE, Schulson LB, Benjamin EJ, Magnani JW. Social determinants of atrial fibrillation. Nature Reviews Cardiology. 2021 Nov;18(11):763-73.

3. Sandhu RK, Seiler A, Johnson CJ, Bunch TJ, Deering TF, Deneke T, Kirchhof P, Natale A, Piccini Sr JP, Russo AM, Hills MT. Heart Rhythm Society Atrial Fibrillation Centers of Excellence Study: A survey analysis of stakeholder practices, needs, and barriers. Heart Rhythm. 2022 Jun 1;19(6):1039-48.

4. Mas Dalmau G, Sant Arderiu E, Enfedaque Montes MB, Solà I, Pequeno Saco S, Alonso Coello P. Patients' and physicians' perceptions and attitudes about oral anticoagulation and atrial fibrillation: a qualitative systematic review. BMC family practice. 2017 Dec;18:1-1.

5. Amara W, Larsen TB, Sciaraffia E, Hernández Madrid A, Chen J, Estner H, Todd D, Bongiorni MG, Potpara TS, Dagres N, Sagnol P. Patients' attitude and knowledge about oral anticoagulation therapy: results of a self-assessment survey in patients with atrial fibrillation conducted by the European Heart Rhythm Association. Ep Europace. 2016 Jan 1;18(1):151-5.

6. Gallagher C, Middeldorp ME, Hendriks JM, Lau DH, Sanders P. Lifestyle as a risk factor for atrial fibrillation. Cardiac Electrophysiology Clinics. 2021 Mar 1;13(1):263-72..

7. Hussein M, Ahmed S. Effectiveness of an Educational Program on Patients' Knowledge Concerning care of Vascular Access of Hemodialysis in Al-Muthana Teaching Hospitals. Iraqi National Journal of Nursing Specialties. 2020 Sep 27;33(1):33-43.

8. Mousa AM, Mansour K. Effectiveness of an Instructional Program Concerning Healthy Lifestyle on Patients' Attitudes after Percutaneous Coronary Intervention at Cardiac Centers in Baghdad City. Iraqi National Journal of Nursing Specialties. 2020 Sep 27;33(1):1-1.

9. Abdul-hussain M., Hassan, B. Effectiveness of an Instructional Program Concerning Non-Pharmacological Guideline on Controlling Essential Hypertension among Patients at AL-Sader Hospital in AL-Najaf AL-Ashraf City. Iraqi National Journal of Nursing Specialties. 2020 Sep 27;33(1):93-103.

10. Ahmed FF, Hassan HB. Effectiveness of an Instructional program on Patients with Ulcerative Colitis Adherence for Medication and Diet to Prevent Colorectal Cancer: Case and Control Study. Iraqi National Journal of Nursing Specialties. 2022;35(1).

11. Hermis AH, Abed RI. Effectiveness of Self-Regulation Fluid Program on Patients with Hemodialysis Self-Efficacy for Fluid Adherence in Al-Diwaniyah Teaching Hospital. Iraqi National Journal of Nursing Specialties. 2021;34(2):74-88.

12. Lafta ZR, Khudur KM. Effectiveness of an Instructional Program on Patient's Knowledge Regarding Secondary Prevention of Coronary Artery Diseases in Al Nasiriyah Heart Center. Indian Journal of Public Health Research & Development. 2020 Apr 1;11(4).

13. Brunk DR, Taylor AG, Clark ML, Williams IC, Cox DJ. A culturally appropriate self-management program for Hispanic adults with type 2 diabetes and low health literacy skills.

Journal of Transcultural Nursing. 2017 Mar;28(2):187-94.

14. Kaufman BG, Kim S, Pieper K, Allen LA, Gersh BJ, Naccarelli GV, Ezekowitz MD, Fonarow GC, Mahaffey KW, Singer DE, Chan PS. Disease understanding in patients newly diagnosed with atrial fibrillation. Heart. 2018 Mar 1;104(6):494-501.

15. Key W. Understanding health literacy in the Latino population, 2019. https://uhir.tdl.org/bitstream/handle/10657/4380/Whitney%20Key%20from%20Perspectives-onsocial-work_summer2019-2.pdf?sequence=1&isAllowed=y.

16. Rowe J. Evidence-Based Intervention to Improve Health Literacy among Older Adults with Newly Diagnosed Atrial Fibrillation (Doctoral dissertation, University of Nevada, Las Vegas). 2022.

17. Gallagher C, Middeldorp ME, Hendriks JM, Lau DH, Sanders P. Lifestyle as a risk factor for atrial fibrillation. Cardiac Electrophysiology Clinics. 2021 Mar 1;13(1):263-72.

18. Khadyer AY, Hassan HS. Effectiveness of an Instructional Program on Knowledge for Patients with Chronic Obstructive Pulmonary Disease Toward Self-Care Management at Al-Hussein Teaching Hospital in Al-Nasiriyah City. Indian Journal of Forensic Medicine & Toxicology. 2019 Oct 1;13(4).

19. Najee AF, Hassan HS. Effectiveness of an Instructional Program on Knowledge of Type 2 Diabetic Patient Toward Ocular Self–Care at Diabetic and Endocrine Center in Al-Nasiriya City. Indian Journal of Forensic Medicine & Toxicology. 2019 Oct 1;13(4):936.

20. Khaleel M, Hassan H. Effectiveness of an Instructional Program on Knowledge of Patients with Renal Failure Undergoing Hemodialysis Concerning Self-Care in Baghdad Teaching Hospital. Indian Journal of Forensic Medicine & Toxicology. 2019 Oct 1;13(4).

21. Taibanguay N, Chaiamnuay S, Asavatanabodee P, Narongroeknawin P. Effect of patient education on medication adherence of patients with rheumatoid arthritis: a randomized controlled trial. Patient preference and adherence. 2019 Jan 11:119-29.

22. Pednekar P, Heller DA, Peterson AM. Association of medication adherence with hospital utilization and costs among elderly with diabetes enrolled in a state pharmaceutical assistance program. Journal of Managed Care & Specialty Pharmacy. 2020 Sep;26(9):1099-108.